The VOLTA REVIEW

A MONTHLY DEVOTED to the PROBLEMS of DEAFNESS.

Volume XIII DECEMBER, 1911 Number 7

Welfare Work at Horace Mann School

How to Teach Geography

An Invention for the Lip-Reader

The de l'Epee of the East

Eugenics and the United States Census

The VOLTA BUREAU
WASHINGTON D·C·

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THE American Association to Promote the Teaching of Speech to the Deaf, a scientific and scholarly body, was incorporated under the laws of the State of New York in 1890 "for the purpose of promoting instruction in speech to all deaf children throughout America."

In December, 1908, the Association took over and is now continuing the work of **The Volta Bureau for the Increase and Diffusion of Knowledge Relating to the Deaf.**

The two institutions labor to keep alive in the deaf the most precious acquisition of the human race, the faculty of speech, to the end that no child in America shall grow up dumb because of deafness; to obtain equal opportunities, educational or otherwise, for the deaf; correctly to inform the public regarding this great class of our population, who number some 89,000 according to the last census; and to conduct research work into the general subject of deafness and the problems arising therefrom.

The **membership** of the Association includes representatives of every system of teaching speech to the deaf that is now extant, as well as aurists, psychologists, scholars, scientists, philanthropists, the deaf themselves, and all investigators into or thinkers upon the general subject of deafness and its phenomena.

The Association accomplishes its work, namely, the promotion of the teaching of speech to the deaf and the diffusion of cognate knowledge:

1. By **publications,** including monographs and ***The Volta Review,*** an illustrated monthly magazine of general and technical interest, all the receipts from which are devoted to the purposes of the magazine itself or to furthering the work of the Association.

2. By the maintenance of **the largest technical library** of its character in the world. The library is located at the Association's home, in the Volta Building, Washington, D. C., and is open to the free use of all members.

3. By **conventions,** at which all the leading specialists in problems relating to the deaf meet for an interchange of views and for the delivery of addresses, which are later published.

4. By the preparation of **exhibits** for the purpose of enlightening the public as to the character, the importance, and the progress of the work done by the Association.

5. By contributing toward the maintenance of **a normal class** of instruction at the Clarke School, Northampton, Mass., a sum which last year was in excess of the total revenue derived from membership dues in the Association.

6. By providing **a clearing house** of information through its executive offices in the Volta Building, at Volta Place and Thirty-fifth street Washington, D. C. This correspondence department is under the supervision of Frank W. Booth, the general secretary of the Association.

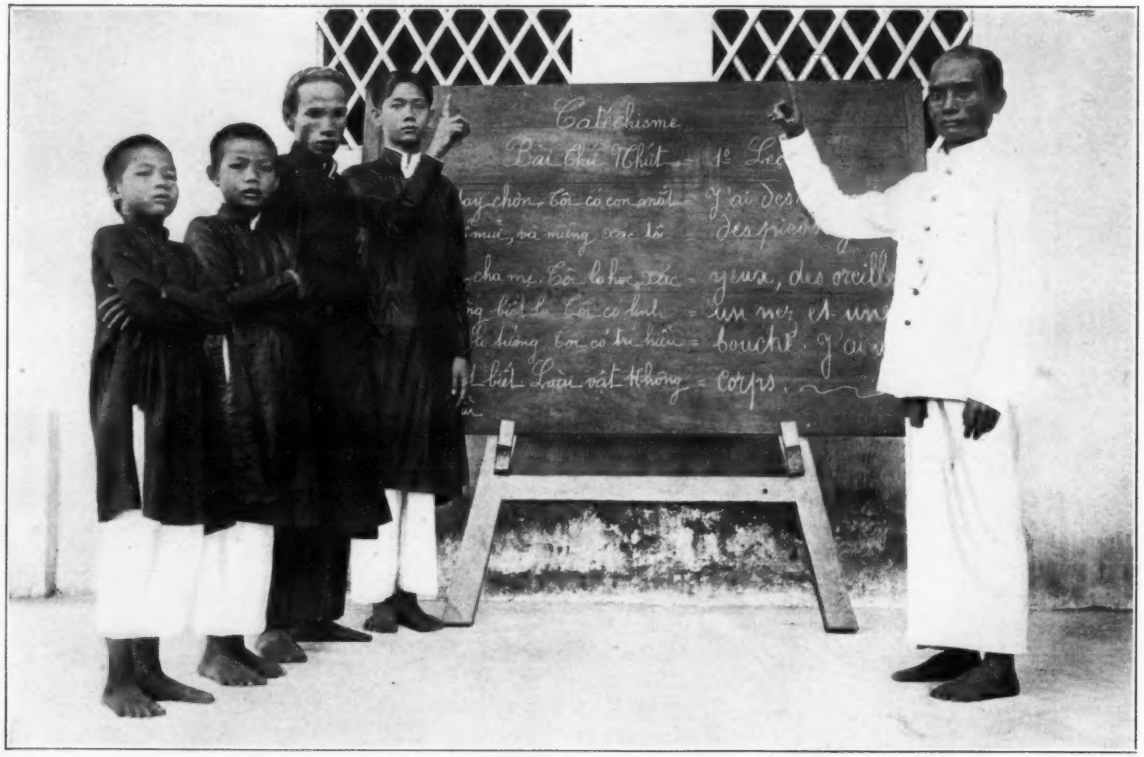
7. By maintaining **a Teacher's Information Agency,** which is free to members. Last year the Information Agency received about 70 applications from teachers, and the number of inquiries for teachers was in excess of this supply.

8. By the preparation and circulation of **exhaustive statistics and information** relating to the deaf.

9. By such additional **research work** as the Association's resources will permit.

The **annual dues are $2** and the fee for a life membership is $50. There is **no entrance fee.**

All members of the Association are entitled to its magazine, ***The Volta Review,*** free of charge for the period of membership; to a reduced rate on its publications; to the free use of its library, and to all information collateral to the purposes of the Association which may be in the possession of its officers.



THE ANNAMESE DEAF BOYS AND THEIR TEACHER, TO WHOM FATHER AZÉMAR GAVE ALL

See "Father Azémar, the de l'Épée of the East," p. 394

THE VOLTA REVIEW

Formerly THE ASSOCIATION REVIEW

A Monthly Specializing on Deafness and the Deaf

Volume 13 DECEMBER, 1911 Number 7

WELFARE WORK AT HORACE MANN SCHOOL

HOW THE CHILD IS PROVIDED WITH CONVERSATION CLASSES, WITH OUT-OF-HOURS TEACHING IF NECESSARY, IS FITTED FOR A TRADE AND HELPED TO EMPLOYMENT UPON GRADUATION

BY MABEL ELLERY ADAMS, B. A.,
Assistant Principal, Horace Mann School, Boston, Mass.

AS FAR back as August 22, 1894, Miss Sarah Fuller and some friends organized a Parents' Association in connection with the Horace Mann School. The Association, which admitted to membership any one interested in the welfare of the deaf, was incorporated the following April, under the laws of Massachusetts, under the title Boston Educational Association for Deaf Children, in order that it might legally receive gifts or bequests.

In the early days the Association confined its activities to three main lines: the holding of meetings at which parents and teachers could become acquainted and talk over the special needs of the children; the instruction of parents by specialists in regard to deafness, matters of hygiene, and the like; and the following up of deaf pupils in their after life for the purpose of helping them in various ways, especially in obtaining employment.

In recent years the work of the Association has changed its character materially. The meetings of the parents have been discontinued, not on account of lack of interest, but for lack of room, as the hall which was formerly available has had to be put to school-room use. The finding of employment has gone on as before. The parents of past pupils have been especially interested in helping younger ones as they leave, because, as they often say, "The school did so much for my child." Time and the realization of different needs have brought about effort along several lines, all of which seem worthy of brief description.

OUT-OF-HOURS TEACHING

One definite line has to do with supplementary teaching. It is often a great problem in any school to know how to do justice to the individual who does not fit the grade without neglecting the rank and file; but in a school for the deaf this problem is always looming up, because, in addition to the ordinary misfits—the children who are behind in one or two subjects—so many children are unfortunately placed on account of natural language coupled with entire ignorance of speech-reading, and so many others are miserably handicapped by delayed entrance to school.

The Educational Association, recognizing these weaknesses, has for some time been raising money to be used for private instruction, outside school hours and outside the school building, in such cases as the principal deems most pressing. Formerly in a few instances this tutoring was done by teachers of the regular staff; but now it is entirely in the hands of expert teachers not employed in the school. It must not be

supposed that either the school or the Association is contented with results. Both time and money are as yet wanting to do all that might be done in this direction; but at least a beginning has been made and a path has been marked out to be better trodden in the future.

CONVERSATION CLASSES

Another piece of work which the Association carried on for several years was productive of much good. Some of the members felt that the children would profit greatly if they could have frequent opportunities to talk with people who were neither teachers nor intimate friends. So they secured the co-operation of a club of ladies, who came to the school once a week during the winter and talked with the older girls for an hour or two.

The girls were divided into groups—not more than four in a group—and the talk was of a general nature. No attempt at instruction of any kind was attempted; indeed, it was rather avoided. Often the ladies took their special groups out for some trip to a picture gallery or park. Sometimes they took them for a drive or automobile ride, and sometimes entertained them at their homes.

The ladies interested their men friends in the work, and several young men came on a different afternoon for a time and entertained the boys. But the Association was never able to do this work as effectively for the boys as for the girls, because the kind of men who would be willing to undertake it are usually engaged during the afternoon, either in business or at college. This work was discontinued during the present school year, because the girls who would naturallly have entered the "conversation classes" were otherwise engaged, as will be explained in the next paragraph. It is hoped, however, to resume it in the future.

MISS BROOKS'S TRADE SCHOOL

Some of the members of the Association who had especially interested themselves in obtaining employment for pupils as they left school became convinced of the desirability of a trade school, where the pupils could be taught the beginnings of some trade or handicraft. The chief mover in this undertaking was Miss Louise Winsor Brooks, who had previously assisted in organizing the conversation work with the girls in the afternoon, and with others had found employment for many pupils.

The trade school which has resulted from this idea is not organically connected with the Association, although it may truthfully be called an outgrowth from it; nor is it in any way connected with the public-school system of Boston, although, again, the school authorities are cognizant of its existence and in sympathy with its general aim.

The Trade School for the Deaf, as it stands today, is, in fact, a private enterprise conducted by Miss Brooks, who has financed and organized it and acts as general superintendent. The school occupies a floor in a former dwelling-house at 480 Boylston Street. It has afternoon sessions five days in the week and a morning session on Saturdays. The pupils go there at the close of the session at the Horace Mann two or three afternoons a week. A few graduates are also working there, fitting themselves for some definite position which they have in view.

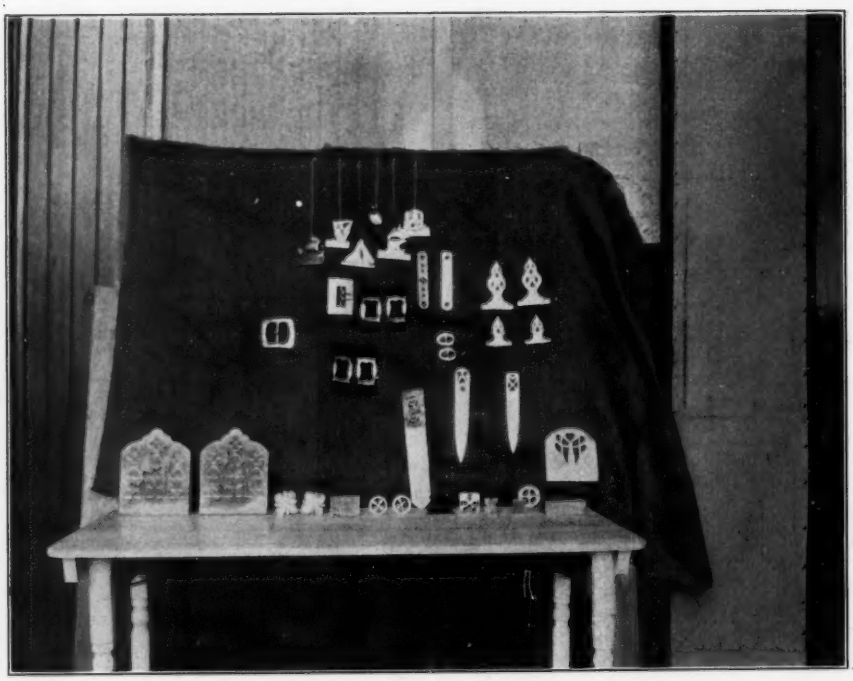
TRADES TAUGHT

Dress-making, millinery, and practical embroidery for the girls, and metal-work or silver-smithing for the boys are the trades at present taught. The nature of the girls' work needs no explanation. The metal-work was undertaken because Miss Brooks was so fortunate as to interest in the school a member of the firm of one of the great jewelry houses, himself a working artist in silver, who believed there might be great possibilities for the deaf in his work. He gave some instruction himself and sent his foreman to supplement it, and the present teacher of metal-work teaches in accordance with his plans. Two or three former pupils are already at work for this firm

THE TRADE-SCHOOL'S MODISTES-IN-TRAINING

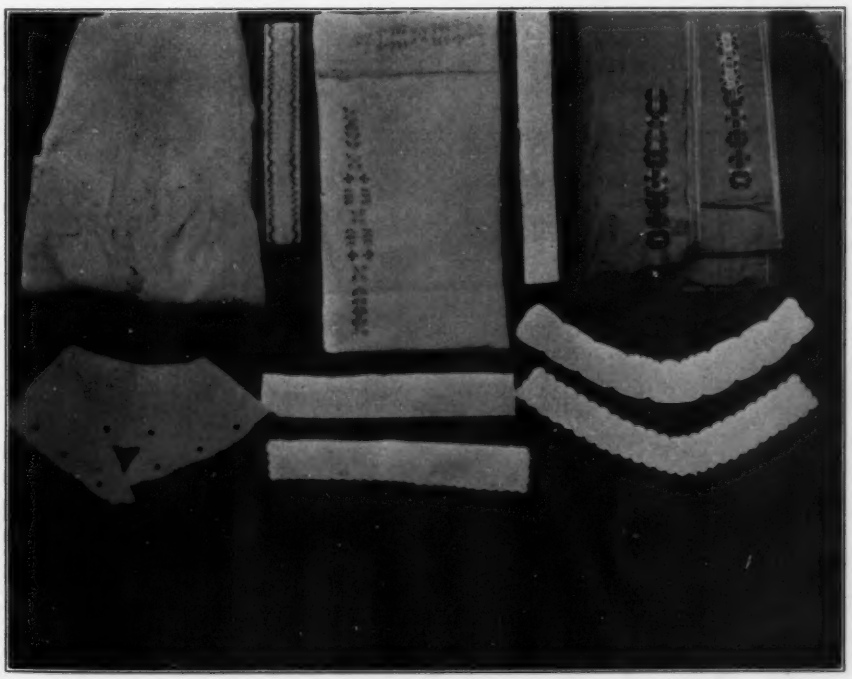
A FEW FASHIONS FROM THE DRESSMAKING CLASS

THE CLASS IN METAL-WORKING—



—AND SOME OF THE WORK IT HAS TURNED OUT

IN THE EMBROIDERY CLASS THE GIRLS LEARN DEFTNESS AND TASTE



SOME OF THE EMBROIDERERS' NEEDLEWORK

in the capacity of apprentices, serving for the present without pay.

The girls in the millinery, dress-making, and embroidery classes are trained with a view to placing them in modern establishments. They are taught as many different branches of the work as possible. In millinery they are taught everything, from frame-making to trimming; but in dress-making no attempt is made to turn out finished dress-makers, because, except in the case of those going out by the day, each part is now done by an expert.

The work of the Trade School is not intended to supersede the manual training and art work of the Horace Mann. The cooking, sewing, and sloyd, the paper and cardboard construction, and the elaborate and varied instruction in drawing and painting required by the Boston course of study go on as usual. The Trade School is entirely supplementary.

This trade school is still in its infancy and is struggling with many difficulties. The founder, Miss Brooks, would like to put it on a firm financial basis, to enlarge its scope so as to include more trades, and to offer in connection with it definite instruction, by a trained teacher of the deaf, in the language of each trade. Of course the very existence of such a school, entirely dependent upon the energy and generosity of one or two persons and such funds as can be raised by sales and subscriptions, is somewhat precarious. But, on the other hand, it must be remembered that, historically considered, the Trade School for the Deaf is now at a stage through which the kindergartens, cooking, sewing, sloyd, and Swedish gymnastics of the Boston public schools, and the Boston Trade School for Girls (a State-aided city institution) have all passed. Every one of these began as a private enterprise, paid for by private funds, and ended by being regularly adopted into the public-school system of the city.

PHYSIOLOGY AND PSYCHOLOGY OF THE DEAF CHILD[1]

BY CHARLES D. LOWRY, District Superintendent of Schools, Chicago, Ill.

THE literature on the deaf is extremely voluminous. It would seem as if nothing new could be said. Indeed, this brief paper claims to say nothing new; only to bring together a few old ideas in a form that, so far as I know, they have not heretofore taken, pleading as a justification the conviction on the part of a comparative outsider that, with all the loving devotion and expert skill that have been given to the care and education of the deaf, these most unfortunate folk are still not getting all the advantage that modern science and pedagogy could give them.

It is a self-evident proposition that the deaf person is not a normal individual. The deviation from the normal may be noted in his body, in his mind, and in his emotions. He is abnormal, first, as the result of the injury or defect that caused the deafness; second, as the result of the unusual living conditions brought about by his infirmity.

The first sort of abnormality has been very extensively treated and will here be merely touched upon. Hereditary deafness is generally occasioned by defects in the inmost parts of the ear. Acquired deafness is usually the result of changes in parts of the middle or parts of the inner ear, brought about by inflammation. The inflammation may have been a primary one, or it may have been a secondary effect of scarlet fever, meningitis, or other general ailment.

All these pathological conditions, besides producing deafness, may have other unfortunate effects.

Hereditary influences that produce

[1] A paper read before Department XVI of the National Education Association at its forty-ninth annual meeting, held in San Francisco, July 8 to 14.

malformations of the inner ear seem to be closely related to those which result in brain defects. A child born deaf is many times more likely to be deficient mentally than is a hearing child. Moreover, defects of the inner ear are likely to disturb that delicate function, the sense of equilibrium.

The diseases which produce the inflammation causing deafness may leave permanent results of an unfortunate sort in other parts of the body, as well as in the ears, and thus decrease the general efficiency of the individual. Scarlet fever, like all intense febrile diseases, induces an inflammation of the membranes covering the brain and spinal cord. This affects the gray matter beneath, producing irritability, nervousness, and lessened resistance to all nervous disorders. Such an after effect is peculiarly likely to follow spinal meningitis, the most frequent cause of adventitious deafness.

The inflammation itself, involving as it does tissues in close proximity to the brain, is a constant cause of danger to that organ. Often it gives rise to a very distressing ringing in the ears. In some cases the ringing is continuous and of a fixed pitch; in others it is intermittent and may run through a considerable range of pitch. In the lightest cases this tinnitus distracts attention and interferes with the clearness of all sensations. In the most severe cases it may cause insanity or drive the victim to suicide.

Moreover, irritation in the hearing apparatus may set up many sorts of subjective auditory sensations. These may be still more troublesome than simple tinnitus. The latter is distressing, but is seldom misunderstood, while these other subjective auditory sensations often are mistaken for real sounds, which may take the form of words and develop into grave hallucinations. Hoch states that the ear takes first place among the organs of sense in so far as delusions are concerned.

The importance of the relation between ear affections and mental disturbance is indicated by the statement of Amberg that "50 per cent of those mentally unsound have defective auricles." MacMillan and Bruner report that of 160 pupils examined in the classes for the deaf in the Chicago schools, 30, or nearly 19 per cent, were found of so low a grade of mentality they had to be excluded from the public schools. (This was an earlier examination than that referred to below.)

The physiological effects upon the individual that result from the mode of life consequent upon his deafness have not, so far as I have learned, been so extensively studied as have other matters pertaining to his well-being.

One of the foundation stones of the theory of evolution is the doctrine, "The function produces the organ." A child may be defined as an elaborate and marvelously sensitive apparatus for reacting upon sensations. These reactions are the chief agencies in the growth, development, and education of the various organs participating in them, and consequently they condition the physical and emotional life of the individual. If, therefore, a child, by reason of deafness, is shut off from one of the two most important avenues of sensation, it must follow that he is also deprived of the beneficial effects of those reactions that accompany these sensations. The bodily tissues that in a normal child would be stimulated by such actions ought, therefore, to show the evil effects of this deprivation. Experimental evidence on this point is not extensive, though items pointing to this conclusion may be found in the notes of several observers. Miss Garrett says that from two to seven years of age the deaf child is at a standstill in the matter of gaining new ideas, and as a result his head is smaller than the average. Currier states that teaching the deaf to speak diminishes the tendency to consumption. MacMillan and Bruner quote studies by Binet, St. Hilare, Ferreri, and others which indicate the physical and mental inferiority of deaf children. But by far the most important evidence is found in a study of the deaf in the public schools of Chicago, made

some years ago by MacMillan and Bruner.

About 240 children were examined thoroughly; and, for certain tests, measurements made from some 100 more were included.

Nearly all these pupils were between the ages of 6 years and 18 years.

The measurements included those of weight, height sitting, height standing, size of head, strength of grip, lung capacity, motor ability, perception time, and some others.

In all save one of the particulars investigated it was found that the deaf children were inferior to the average of hearing children, though this inferiority was more striking in some lines than in others. The exception was in the case of weight. Deaf boys were found slightly lighter than the average of hearing boys, while deaf girls were noticeably heavier than normal girls.

The most important results were the following:

"Deaf children have smaller heads than do hearing children, taking as a criterion the length, breadth product, and they are more broad-headed"; or, to state it in another way, in length of head 68 per cent of the boys and 71 per cent of the girls are below the average of hearing children of corresponding ages. In the breadth of head 60 per cent of the boys and 69 per cent of the girls are equal to or in excess of the average.

In strength of grip the deaf were found to be somewhat inferior to the average of hearing children, the difference for the right hands being noticeably greater than for the left hands. In other words, the deaf are more nearly ambidextrous.[2] Earlier studies of these same investigators indicate that there is a close relation between ambidexterity and mental inferiority.

The tests for motor ability were of two kinds. The first consisted in noting the number of taps that could be made with an electric tapper in thirty seconds. The second consisted of noting the time required to draw a line with a pencil through each of a group of 100 a's distributed uniformly over a page. In both these tests the deaf showed marked inferiority and a tendency toward ambidexterity. In the tapping test 74 per cent of the deaf were below the average of normal children of corresponding ages. In the test of crossing out letters 82 per cent made records poorer than the average for normal children. The motor ability of a deaf child was in general found to be about the same as that of a hearing child two or three years younger than himself.

This feature of the investigation is most significant. Both of the above tests are really measurements of reaction time. It is natural that a reaction apparatus which is least used will be least efficient. The nervous mechanism of the deaf being shut off from one of the great avenues of sensation will naturally react less often than will that of a normal individual; its efficiency will be correspondingly less.

The most striking of all the tests concerned lung capacity. By this is meant the greatest amount of air that can be expelled from the lungs after a forced inspiration. It was in this particular that the deaf showed the greatest inferiority. In general their lung capacity ranges from 15 to 25 per cent less than that of normal children of corresponding ages. Expressed in another way, 88 per cent of the boys and 60 per cent of the girls were inferior in lung capacity to normal children.

This condition might have been expected. All the consequences that influence the physique of the deaf child unfavorably are concentrated on the lungs. The flood of sound stimulates to reaction no part of the body of a normal child more than it does the lungs. The diseases that cause inflammation of parts of the ears very often affect the lungs directly and still more often modify unfavorably the passages leading to the lungs. Finally, the deaf child, until he is taught to speak, loses that ceaseless

[2] Reports I and III, Department of Child Study, Chicago Public Schools.

exercise of the lungs that comes from the talking, shouting, laughing, and crying so characteristic of normal children.

It is interesting to notice that in this test the girls from ten years on made a better showing than the boys. Indeed, the deaf girls in several particulars showed a nearer approach to the standards of ordinary girls than the deaf boys did to the records of hearing boys. May not this be due to the fact that the girls, by their work in the home, find a larger relative measure of activity than do the boys? The mental and emotional life of deaf children, as of all human beings, is intimately bound up with the subject of language.

We have stated above that every sensation must be followed by an action. Another statement of the same law is that every impression must have an expression. With an infant any sort of expression will do; any one of a thousand sensations may cause him to shout, move his hands, or kick up his toes. But even the infant soon begins to have a purpose in his expression. He wants it understood that he is calling for food, or wants to be picked up, or wants comfort in some other particular. His language is forceful, but not always clear. With the patient mother it is like the game of magic music; she tries one thing after another until she knows by the cessation of the music that she has found the prize.

This will do very well as long as the child's wants are few, but with his growth of interest comes the need of clear expression that may readily be understood by his fellows.

Nothing is more distressing to the human mind than to be unable to give adequate expression to one's thoughts and emotions; to be unable to make oneself understood by his fellows. Such inability may, according to the nature of the case, produce either paroxysms of rage or stagnation of will.

There are several forms of language, such as gesture, or the making of pictures, but the written or spoken word is immeasurably superior to all others.

A word is the means whereby an idea can be isolated so that it can be examined. In a very real sense a word creates an idea. It may be true that thinking can be done without words, but certainly very little is done, and none of a very exact or elaborate nature. We can hardly be said to think about a thing at all until we have a name for it and then have names for every one of its attributes or relations.

We constantly ignore things in our environment for which we have no names, such as certain trees, birds, plants, forms of clouds, etc., and as constantly notice them, think about them, and enjoy them when once they are named for us. What is true of material things is vastly more important when applied to the realm of intangible ideas, as force, honor, history.

Now the mind is that which thinks, and its growth is due to its performance of its proper function. Without words the mind would remain very nearly a blank; it would have few tools or materials with which to work; no means of isolating, testing, examining, labeling ideas; no means of comparing its conclusions with those of other minds of this age or of past ages. It could appropriate few ideas from the stock accumulated by other minds. Each individual would very largely live unto himself and die unto himself.

The means of using oral language are the vocal organs and the organs of hearing. Of the use of both of these the deaf are deprived; the use of the hearing apparatus is permanently lost in most cases. The use of the vocal organs is attained by a labor of loving devotion on the part of the teacher and of infinite patience on the part of both teacher and pupil. The immeasurable gain in happiness and efficiency that comes from being able to converse with one's fellows by word of mouth amply justifies all the labor spent in the effort to give speech to the deaf child. It should be begun much earlier than at present is the practise. The age at which children are admitted to the kindergarten is certainly none too soon for taking up this work.

But even this advantage should not stand in the way of giving a large vocabulary in some other form where the oral method is slow in accomplishing this all-important end.

The great loss of mental power suffered by the deaf is shown in the following test, made by MacMillan and Bruner: Each child was given a page filled with printed words, or rather groups of letters, containing 100 a's. The child was asked to mark off all the a's as quickly as he could. From the time taken to do this task was subtracted that required to mark out the 100 a's in the test noted above (the reaction-time test), and the remainder was called the "perception time": that is, the time taken to discriminate the a's from the other letters in the various word-forms on the page. The younger children required nearly twice as much time as did the hearing children of similar ages, and the older children required about one and one-half as much time as hearing children; 82.5 per cent required a longer perception time than the normal. Here, as in the reaction-time test, the deaf children made records just about equal to those of hearing children two or three years younger than themselves.[3]

The emotional experience of a deaf person is relatively barren. Whatever theory of emotions we adopt, we know it to be true that imitation, whether conscious or unconscious, of the acts of others stimulates in us feelings and emotions akin to those associated with the actions imitated. One person in a group yawns, several others are likely to do so visibly, every one else is sure to do so in suppressed fashion, and all will be conscious of a feeling of weariness. On the contrary, a smiling face and a merry tune will cheer up any company.

We become aware of the actions and attitudes of others chiefly through sight and hearing—probably much more through the latter than the former. We can know by sight of those actions performed in front of us and in good light; by hearing we are made aware of the acts of persons all about us and in the darkness as well as in the light.

No activity so commonly or so adequately expresses emotion in all its kinds and shades as the spoken word, and of even more importance in this respect than the word itself is the tone in which it is uttered. By long patience the deaf child may learn to interpret the spoken word, and an incomparable advantage as a means of social life is thus given him; but he is still unable to know the words of any but the one person to whom he is attending. The give and take of conversation, with all its stimulus to alertness, is shut out from him, and the tones of the voice in speech or in song he can never know. His emotions, therefore, lack the stimulus and the corrective effect coming from all sounds and particularly that interchange of emotions which is effected by the human voice, and which is the chief means of bringing about unity of thought and action, sympathy, and that quality or sum of all those qualities that are best in us, which we may call humanness.

Ask any teacher of the deaf in what respects the dispositions of deaf children differ from those of other children, and she will probably say that they are not as gentle, or they are a little more savage, or in some other way she will indicate that she notices a gap in the character that shows emotional deficiency. Watch a ball game where deaf boys form one or both teams. Instead of being the quiet, noiseless performance you might expect, you will find it punctuated with such a wealth of fierce noises and savage grimaces and gesticulations that you are sure the whole thing will soon break up in a general mêlée.

Clouston says that no member of the body can be injured without producing an effect on the mind. St. Paul tells us that when one member suffers, all the members suffer. Surely we see these laws acting to their full limit in the case of the deaf child.

[3] The children subjected to these tests were a selected group from which those mentally defective had been excluded. This makes the results the more significant.

We have noted that the conditions which produce or are associated with deafness, whether congenital or adventitious, have a close relation with those which cause brain defects. Deaf children were found inferior to hearing children in height, length of body, size of head, motor ability, lung capacity, quickness of perception, and in other physical and mental tests. Their emotional life is narrow and unbalanced.

Perhaps some of these burdens cannot be lifted from the shoulders of deaf children, but surely something more can be done than is even now accomplished.

The general inferiority of the deaf in so many lines of growth, strength, keenness of sense, quickness of action, point to the necessity for a great amount of motor training through games, gymnastics, manual training, and all forms of expression. These cannot be left to the instincts of the children or given a few minutes a day, as is very sadly the case in the schooling of normal children. The play and the work must be scientifically planned and systematically carried out. They should combine exercises of strength, of dexterity, of quickness and endurance, that all the body may be brought into action, the heart strengthened, and the lungs expanded.

This paper has already emphasized the importance to the deaf of training in oral language. It would be difficult to overestimate its value, but of still greater value is training in thinking. Thinking can make little progress without words, and words the deaf child should be given in large numbers while he is still very young. They should be taught by word of mouth, if possible; but, if not, in some other way—I could almost say any other way—else the dormant intellect may never be aroused to a point where speech can be mastered, for it is conceded that without a fair share of intellect speech never can be mastered by the deaf.

No one can read the biographies of Laura Bridgman and Helen Keller without being forcibly impressed with the wonderful way in which the loss of one or more senses may be compensated by the remaining ones. But we must also note that Miss Bridgman had the personal care of a great genius, Dr. Howe, and that Miss Keller has enjoyed the lifelong devotion of that very talented teacher, Miss Sullivan.

Now the triumphs of modern civilization have consisted in giving to all the privileges once enjoyed by the few. This should be done in the case of the deaf. Is this possible? Yes, and more is possible.

Seashore said recently that the most significant development in the next decade would be the coming of the consulting psychologist, who would study a given situation and from carefully determined data formulate a course of action that should be successful, because it would be in conformity to well-established laws of the mind. Surely in the care of the deaf is need of the consulting psychologist. Every deaf child should be subjected to a careful psycho-physical examination to determine accurately his physical, mental, and emotional status. Upon this diagnosis should be founded a course of care and instruction designed to meet his special needs. At frequent intervals the examination should be repeated to determine how effective the treatment had been and to prescribe a new course of action. This plan has been put in practise in the treatment of subnormal pupils in the Chicago public schools with good results.

If applied to the deaf, not only would the best of modern science and pedagogy be given to all, but many problems, such as the development of the remains of hearing and the utilization of islands of hearing which have been scarcely touched, would doubtless be systematically studied, and great good could not fail to result.

AN INVENTION FOR THE SIGN-TAUGHT LIP-READER

BY HARRIET U. ANDREWS, Kansas City

MR. EDWIN H. HATCHER, of Kansas City, Mo., who, although only partially deaf, was taught by signs, and until a few months ago was unable to speak, has perfected a useful device as an aid to beginners in lip-reading. Like many inventions, it was evolved from the inventor's own necessity. He had for some time been interested in trying to speak; but after he had learned in some degree to control his voice and utter articulate speech, he found that he was still unable to understand the simplest syllables when formed by another person's lips. He could repeat sounds, forming them with his own lips, but they carried absolutely no meaning to his brain. He had *thought* in signs and in writing for so long that it was necessary, in order to practise lip-reading at all, to write each syllable or word and show it to him before it was spoken. Even after he had seen a word written and formed by the lips many times, he would fail to recognize it when it was repeated after a slight digression to some other matter. Practising was an awkward and tiresome business, since everything had to be written, and he was compelled to look first at the speaker's lips, then to the paper or wall slate, and then back to the speaker again. It seemed to him that if there were some means by which he could see the spoken and written word *simultaneously* he might progress more rapidly.

After considerable experimenting the little apparatus shown in the illustration was evolved, and almost immediately his lip-reading began to improve. The device is very simple. It consists of a frame of zinc or hard rubber, light and easy to hold, through which slides a tape of celluloid upon which words, syllables, and a considerable number of sentences may be written. In preparing the tape for a lesson it is placed on a ruler, and the same sentences are written on both sides of the tape, the space used being regulated by the ruler so that the two slides will show corresponding sentences when passed through the frame. The tape slips easily through the frame, guided by the speaker's hand. The words, syllables, or sentences follow consecutively, appearing at each end of the inside frame, one copy at the farther end for the benefit of the speaker and the other copy at the end directly over the speaker's lips. The frame is so small that the mouth action is entirely visible, and the pupil can see the written words gliding across his teacher's upper lip at the same time that they are uttered. A small mirror placed in the frame enables the pupil, when practising alone, to watch his own mouth while he is reading the tape.

To an adult whose speech is perfect, lip-reading does not present the same difficulties as to the deaf of imperfect speech. One with a good command of language, no matter how backward he may be at first, is sure to recognize from his teacher's lips some words with which he is familiar; but his early progress may be facilitated and some of the strain on his attention removed if a part of the lesson period is devoted to practising sentences that he sees before him in writing.

MR. HATCHER'S ACCOUNT OF HIS INVENTION

How can mute's present education master themselves to learn speech since they left sign schools without being taught in speech?

This question is that in spite of my age I have been practicing speech under instruction of Miss Harriett Andrew, a speech lip-reading teacher every Sunday afternoon for seven months and is that my education has the power of mentality that has overcome great difficulties in speech with assistants who willingly help to correct my voice.

The way is a first thing that I have studied Bell's visible speech book (as taught to the deaf) to perform movements of my rigid tongue, soft palate, lips and low jaw in practice for a few weeks before I made my voice in syllables.

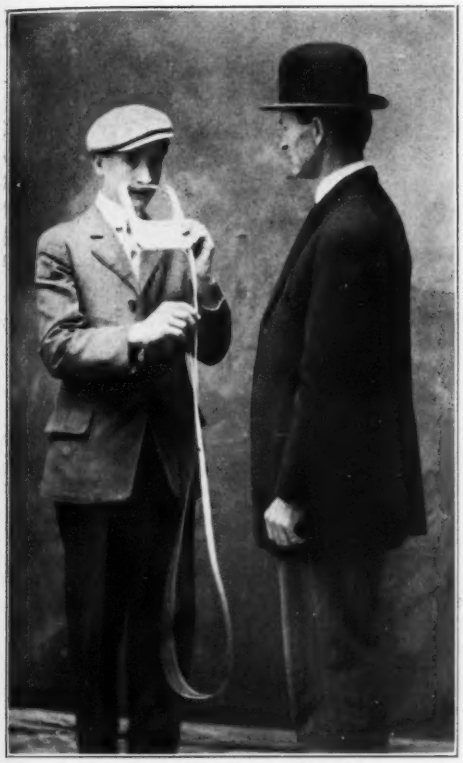


FIGURE 1

FIGURE 2

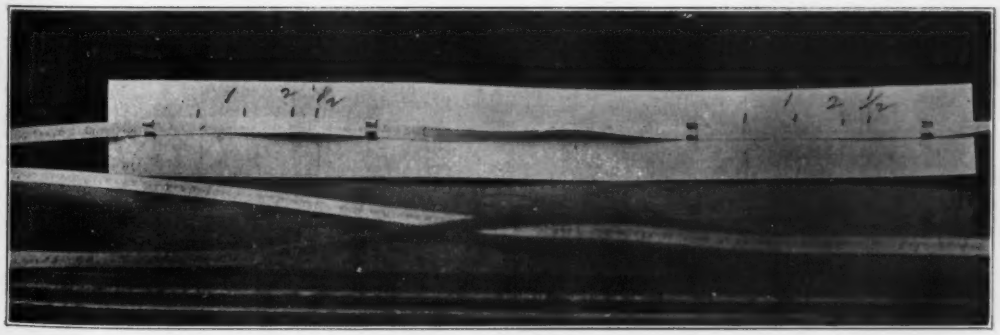


FIGURE 3

MR. HATCHER'S INVENTION TO AID THE LIP-READER WHO THINKS IN SIGNS

The invention consists of a light frame through which slips a tape bearing the sentences to be lip-read. The sentences are in duplicate, and are so arranged that one copy appears over the speaker's lips, while the other passes in front of him. The apparatus can also be used for mirror-practise (Fig. 2).

So when I understood the grammatical work of the speech organ well, I began to vocalize several words in vowel sounds for a few weeks and had sufficient courage to utter some simple syllables to friends and strangers as when I merely wished to know whether they could understand my voice, or not, I found that they were greatly surprised to hear it plainly.

Thus the cause has been exerting great interest upon me to continue speech practically until when I read an article in the Kansas City Star paper in regard of Miss Andrew's instruction in lip-reading for the deaf, I went to see her about the visible speech I studied by myself and I have been taking lessons with her since ever.

Miss Andrew's courage and interest has been influencing my ambition to take great advantage in speech for 28 Sunday afternoons in seven months so far as you may ascertain to understand that all these sentences are what I can utter in pronounications as rapidly as a hearing person does so.

At present I enjoy the speech with customers and friends in business and society. Of course I use speech more much than lip-reading but am getting used to the latter slowly but surely.

I think lip-reading is probably the hardest one for a long practice and should be learned as easily as speech but have been carefully studying a knowledge of principles and causes of speech lip-reading that will enable beginners to learn it with more quickness by means of my invention.

At final I have discovered a secret phenomenon of the eyes that are dependent upon the most important direction to the movement of lips in practical training to make a plain understanding of lip-reading because the visible nature for perceiving the meaning of sentences is as good as the hearing nature for audibility of voice in sentences.

By this reason I invented a very useful thing as showed with the illustration Fig. 1 that enables a beginner to read written words on one side of a white celluloid tape on the upper lip of an assistant, or teacher while the latter speak to him at the same time of reading the other same words on other side of the tape in the front frame, pulling a ten-foot-long tape around through the inside of the frame till the end of the sentence so the beginer reread the first sentence for a better practice in lip-reading than those who learn to read lips without seeing words close to the movement of the lips.

Besides a beginner can use a small mirror on the front frame to practice reading written words on the tape from his own lips as showed Fig. 2 and can see different movements of his lips in consonant and vowel sounds as it will enable him soon to master lip-reading practically.

Also written words can be erased from the both sides of the tape and other new sentences can be written on the left side of the tape between the marked space 1 to 2½ and the other same sentences on the right other side of the tape as showed fig. 3. When they are done, the end of the tape is put inside of the frame at the front bottom through the top of the frame near to the upper lip and is put down inside to the bottom from where the tape is turned down by the hand.

I believe there would be a much better practice in lip-reading sentences from the lip-reading reflectors for deaf children's valuable use.

Lip-reading reflector outfits will sell at $3.50 each with the fine zinc frame and $5.00 each with black hard rubber frame.

FATHER AZÉMAR, THE DE L'EPÉE OF THE EAST

BY YVONNE PITROIS

WE ARE all familiar with Mrs. Mills's School for the Deaf in Chefoo, China, and follow her labors with hearty sympathy. There is also in Asia another little school for the deaf, less well-known than Mrs. Mills's, yet accomplishing as necessary a work. It is the French School for the Deaf in Laï-thieu, Thudaumot, Cochin China.

It is a remarkable thing that many schools for the deaf have had the same origin: the interest aroused in a generous heart for a poor, neglected child.

Without his interview with the deaf twin sisters, left alone by the death of their first teacher, Father Vanin, the Abbé de l'Epée would never have thought of the splendid mission which, when he was already fifty years of age, was to become his "life-work."

It was the sunny days he spent in the blossoming fields of Connecticut with his little friend Alice Cogswell that inspired in Thomas Hopkins Gallaudet the earnest longing to come to the rescue of other silent children like her.

In the Laï-thieu foundation the same fact gave rise to the same results.

More than thirty years ago there was in this town a kind-hearted priest, a missionary sent by the Roman Catholic Church of France, Father Azémar. He had come from his native country to preach the gospel to the people of Annam, without the slightest idea of the work for the deaf which he was eventually to undertake in that country.

Father Azémar soon began to notice a small boy living in a house near his own, whom he often met when he was going out upon his parochial duties. He was surprised to see the child staying apart from the other boys and girls, who seemed to avoid him. Moved with pity at the loneliness of his little neighbor, the father once went straight to the lad and spoke kindly to him; but, instead of answering, the boy, with a frightened look, escaped as quickly as he could and hid himself in a corner. The parents, with tears in their eyes, confessed to Father Azémar that God was surely very angry with them, for their poor child was possessed by the evil spirit—he was deaf by birth!

Father Azémar was very sorry. He had never had any previous association with a deaf person, and had had to come to far-away Asia to realize the sum of suffering, deprivation, and loneliness which this great burden brings with it. However, instead of shunning the boy, as the natives were doing, he was kinder than ever to him and often took him on his walks or received him in his own home, where he tried to amuse and interest him.

At length the good father determined to send the child to a school for the deaf in France to be educated.

Accordingly, in May, 1880, he obtained for his protégé a free passage on a steamboat making the service between Saigon and Marseilles; and, when the consent of the parents had been finally obtained, Nguyen Van Cam, the first Annamese deaf-mute to receive an education, sailed from Indo-China to France to be demutized and educated.

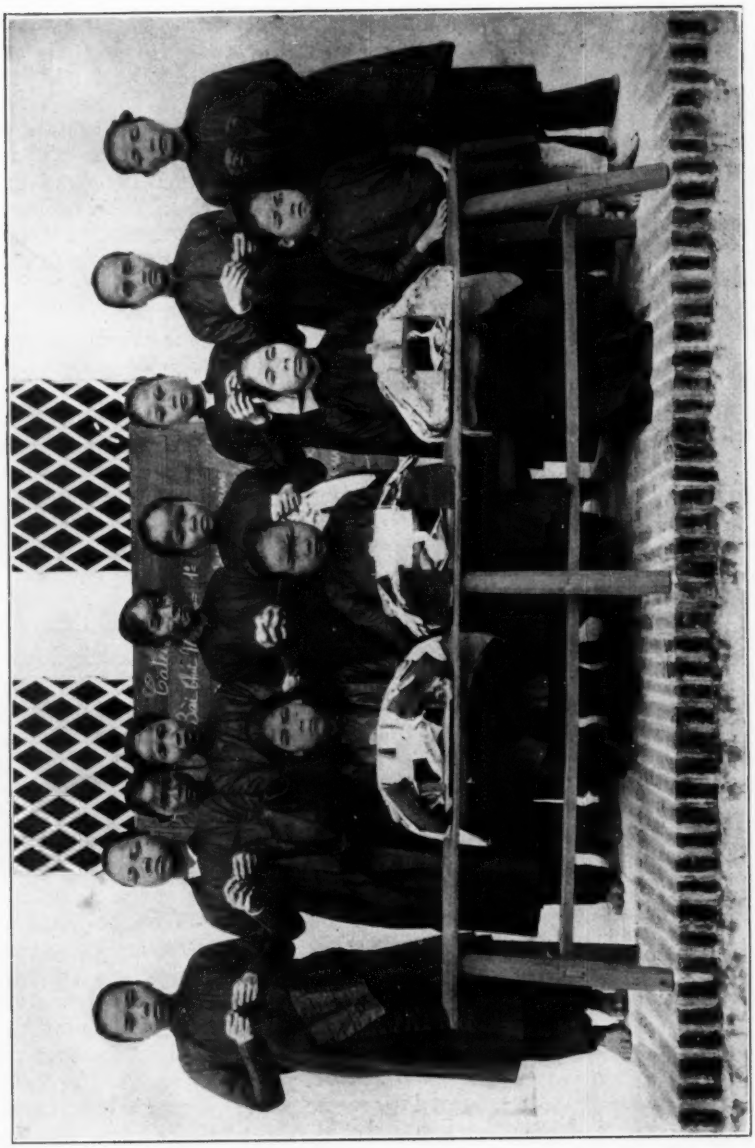
Father Azémar possessed in his birthplace a little land, which had fallen to him by inheritance. This he sold, and the money thus received served to pay at first the child's board at the school for the deaf in Rodez, Aveyron, in the south of France, whither he had been sent to be educated.

But this sum was soon exhausted and the good father was forced to reduce all his expenses, even for food and clothing—to deprive himself of everything not absolutely necessary in order to continue the boy at the school. This constant strain lasted throughout the six years which Nguyen Van Cam—who became after his christening Jacques Cam—spent at school.

At length it occurred to Father Azémar to found a school for the deaf in Annam itself, which, his own observations convinced him, contained 600 deaf-mutes. Support for this undertaking was totally lacking, even from his ecclesiastic superior, the apostolic vicar of Indo-China; nevertheless, the good father was undaunted.

In 1886 Jacques Cam arrived back in Cochin China and was heartily greeted by his benefactor, who immediately took in hand the work so long planned for. Father Azémar taught the boy the Annamese language, which Jacques mastered promptly and perfectly, at the same time learning from him the methods of educating the deaf; and, after many months of hard work, the French priest and his protégé were able to open in Laï-thieu a school for the deaf.

Soon the Laï-thieu School numbered five pupils, then ten and upwards, none of whom was paying board. Father Azémar continued to deprive himself in order to care for the children who were sent to him from various points of the great colony. Never asking help, he consecrated himself to his pupils with a splendid patience and devotion. Even his hours of rest were reserved for them, for as a relaxation he composed for their use a dictionary of the Annamese language, a very useful work, though the father was too poor ever to have it printed.



TO THESE GIRLS THE LAI THIEU SCHOOL MEANS RELIGION, HOME, EDUCATION, AND A WAY TO EARN THEIR BREAD

For nearly ten years this true Abbé de l'Epée of the Indo-Chinese deaf devoted himself to his silent children, till his death, in 1895.

During the last six months of his trying life he had had the good fortune to find a zealous helper, Father Verney, another French missionary, himself arrived in Cochin China in 1880.

Upon Father Azémar's death, Father Verney succeeded as the headmaster of the Laï-thieu School, bringing to this noble work the same love, the same devotion as his predecessor. "I would," he said once, "receive all the deaf of this land, heathen as well as Christian. My only wish is to see them come in the greatest number. I would even take, if it were possible, the deaf of other races, Chinese and Hindus."

However, the mission is very poor. It is out of the question for the pupils to pay board. For three years past the French government has allowed the little school a small annuity, which has been used to replace the straw-mat houses, dating from Father Azémar's ministry, with more comfortable buildings of brick and wood. For the rest the school receives no subsidy and is truly living, day after day, by faith.

The teachers are chosen from the most intelligent former pupils. They begin their work as monitors of the youngest children, and acquire proficiency in teaching through experience and study. The first under-teacher is Jacques Cam. He has married a hearing wife and has four charming children, all hearing. One of his sons, particularly gifted, is a student at Saigon Seminary. The whole little family depends practically entirely on Father Verney.

Most of the former pupils, their studies ended, return to live with their families. Others are engaged as servants by Europeans in the colony. Their adoptive father remains in loving touch with them and receives very good reports of them.

The teaching in the Laï-thieu School is by the manual method, for the reason that the Annamese language is one of the most difficult in existence, possessing subtleties which it has so far been impracticable to teach the deaf to utter and to read on the lips. As in Chinese, the same word, with a different intonation, indicated in its written form by a peculiar accent, may have many different meanings. For instance, the little word *ma*, pronounced in various ways, differing slightly, means rice ground, tombstone, horse, mother, and but. It is hoped, however, that it may become possible to teach the pupils to speak French, which is the official language of the colony. The most intelligent pupils already are able to read and write French.

The school is for both sexes, who are educated separately. In the girls' department there are about fifteen pupils, provided for by a devoted staff of French and Annamese nuns, who were trained by Jacques Cam. These girls are doing all sorts of beautiful handiwork, such as sewing, lace-making, and embroidery. They also rear silkworms and spin the silk. The little income earned in this way helps to sustain the mission. The teachers are very anxious to increase and develop this industry, for it is quite suitable to the Annamese women and would be a very good occupation for the female pupils upon their graduation.

The boy pupils have been far more numerous than the girls, numbering about fifty. They were formerly under the supervision of the Brothers of the Christian Doctrine, who taught them language, classics, and a manual trade, such as shoe-making or joining. Unfortunately, however, as a result of the French law against congregations, the Brothers had to give up this work. In the month of February, 1910, the school was closed up and the deaf boys sent back to their families.

But some weeks after a poor Annamese man came from a distant place to the missioner, bringing with him his two deaf-and-dumb sons, aged 13 years and 10 years, both very bright and intelligent, and Father Verney received them.

Shortly afterwards, on the eve of Ascension Day, two other deaf boys, a little older, came to Laï-thieu, also, pleading

A GROUP OUTSIDE THE LAI THIEU SCHOOL FOR THE DEAF

The figure in white is Jacques Cam. On his right are ranged his wife and children, all of whom can hear. On his left are Pierre Güyen and his wife, a deaf couple who have adopted the little hearing girl who stands by them.

for admission, and they, also, were received. So the boys' school is reorganized with four pupils. Probably when this article appears there will be two more, come as far as the kingdom of Cambodge to be taught. Father Verney has no money to provide for his boys, no teachers save himself and Jacques Cam, but he bravely goes forward, confident, as he said himself, that "the good God will do the rest." Is not such a devotion towards the deaf worthy of our earnest sympathy, of our respect and affection, and is not the Laï-thieu School for the Deaf to be numbered among the most touching foundations on their behalf?[1]

[1] If any readers care to help this worthy and needy mission, their gifts would be gladly received and acknowledged by the Reverend Père Verney, Directeur de l'École des Sourds Muets, Laï-thieu, Thudaumot, Cochinchine, or by Mlle. Yvonne Pitrois, 169, rue d'Entraigues, Tours, Indre et Loire, France.

EUGENICS AND THE UNITED STATES CENSUS

BY W. F. HICKERNELL, Bureau of the Census

IN THE early history of the United States a nation of hardy men and women was developed, because only such could endure the privations and struggles of the pioneer life. Since 1880, however, the population has so concentrated in cities and the total wealth of the country has so increased that material comfort can be acquired with effort unworthy of the name of privation. In the early days mating was between those only who possessed the physical strength required of a pioneer; natural selection did its work. At the present time the defective members of society are amply provided for and often permitted to intermarry. Natural selection of those who shall be mated has been superseded by social selection, and the subject of eugenics has become of practical interest to all interested in the future welfare of the nation. The aim of students of eugenics is to inculcate a spirit or feeling of responsibility in every individual in regard to the mating of the sexes, to the end that every marriage will produce a higher type of the human species, and that the social customs or "folkways" [1] shall not countenance any other sort of marriage.

Before such a movement can accomplish much, facts must be adduced to show that national efficiency has been impaired by the lack of social responsibility in mating. Although such facts exist regarding disease and other phases of the subject,[2] "by far the greater part of the literature of consanguineous marriage is of a controversial rather than of a scientific nature, and a search for statistical evidence for either side of the discussion reveals surprisingly little that is worthy of the name." [3]

Dr. E. A. Fay has shown that there is likelihood of deaf offspring when a deaf-mute marries a blood relative, even if the original deafness was not congenital.[4]

Dr. Alexander Graham Bell has pointed out that "at least 4.5 per cent of the deaf of the country and 4.5 per cent of the blind are the offspring of consanguineous marriages; but we do not know conclusively whether consanguinity in the parents *produces* the defective condition, or whether it simply *intensifies* a pre-existing tendency in the family."[5] Since Dr. Bell had charge of the Special Cen-

[1] Cf. "Eugenics, the Science of Rearing Human Thoroughbreds," by A. G. Keller, p. 134, Yale Review, August, 1908.

[2] Cf. Irving Fisher, Report on National Vitality.

[3] G. B. L. Arner, "Consanguineous Marriages in the American Population," p. 353, Columbia Studies in History, Economics, and Public Law, Vol. XXXI, 1908.

[4] "Marriages of the Deaf in America," Publications of the Volta Bureau, Washington, D. C., 1898.

[5] The National Geographic Magazine, March, 1908, p. 120.

sus of the Blind and Deaf, in 1900, his opinion that "the whole subject . . . might very properly be investigated through the medium of the United States Census Bureau" is of value.

English scientists have tried unsuccessfully to have the subject investigated by the British census. It is the purpose of this article to indicate how the desired information may be obtained by the Bureau of the Census.

The method used in taking the supplementary Census of the Blind and Deaf, in 1900, was by corresponding directly with each blind and deaf person in the United States. From the population schedules filled out by the enumerators when the general census was taken, the sex, race, age, conjugal condition, country of birth, occupation, etc., of each defective person were obtained; but the only information given concerning blind or deaf and dumb persons over and above what was given concerning all other persons was the mere indication of the fact of blindness or deafness. In order to obtain information in addition to the above data, a supplementary schedule was sent to each blind or deaf person, requesting answers to inquiries concerning the degree of blindness or deafness, age when the defect occurred, cause of the defect, similar defects among relatives, consanguinity of parents, school attendance, means of communication, and economic condition. Thus the information contained in the blind-and-deaf report of the twelfth census was obtained partly from the population schedules of the general census and partly from the special schedules of the supplementary census of the blind and deaf. In this report, however, was omitted the data obtained from the general schedules for 19,884 blind and a large number of deaf persons, from whom no reply was received in the supplementary census.

After the publication of his special report, in 1906, Dr. Bell asked Mr. Charles B. Davenport, secretary of the eugenics section of the American Breeders' Association, for suggestions regarding additional questions for the schedule of the next special census of the blind and deaf. Since that time the Eugenics Record Office, of Cold Spring Harbor, Long Island, New York, has been interested in seeing a few additional questions asked on the new census schedule, and Mr. Davenport furnished the Census Bureau with a list of questions which, if answered accurately, would supply information that would enable him not only to understand how the large proportion of congenitally defective offspring are produced, but also to see by what matings the reproduction of such defectives may be stopped. Mr. Davenport states that "probably a million dollars or more is spent each year in taking care of blind who would never have been blind except for unfortunate matings. These matings were made in ignorance of the method of inheritance of blindness." [6]

Mr. Davenport's list of questions was also so constructed as to make possible the differentiation of defectives in whom "Mendelian" inheritance is present and those having defects (especially eye defects) which are sex-limited in inheritance. Mr. Davenport also offered to have the returns analyzed at the Eugenics Record Office after the census had compiled statistics similar to those in the special report of 1900.

That the above information would be of great value to students of heredity is unquestioned. However, the officials of the Bureau of the Census did not think it prudent to make a special investigation at this census, since the information regarding the deaf and blind is being obtained, as in 1900, through correspondence; that is, by mailing blank schedules to persons whose addresses have been obtained from the population schedules. Many of these persons are comparatively ignorant. The longer the schedule the more formidable is the task of filling it out and the greater the likelihood that it will not be filled out at all. The Bureau must bear in mind the fact that it must

[6] Letter of January 13, 1911.

furnish information which will be of assistance to those interested in the welfare of the blind and deaf of the present generation. In answering recent inquiries for information concerning the blind and deaf in certain counties in Kentucky and elsewhere, the Bureau of the Census has been compelled to use statistics taken from the census of 1880, since the later reports, while improvements in some respects, gave less detailed statistics. These inquiries for statistics come from those desiring to provide hospitals and homes for defectives in certain localities.

The schedules of the present supplementary census of the blind and deaf (1911), which is being taken under the general supervision of Dr. Joseph A. Hill, chief statistician of the Division of Revision and Results, call for answers to 33 questions on the blind and 36 questions on the deaf schedule. The questions relating to heredity on the present (1911) schedules are 11 in number, and inquire concerning defects in parents, brothers and sisters, and children; also asking whether the father and mother were first cousins. The additional questions proposed by Mr. Davenport are generally extensions of the questions already on the census schedules. Mr. Davenport asks for each grandparent separately, as "father's father," etc.; also for "father's brothers and sisters," etc., and "father's brother's son," etc. He also asks for the maiden name of the mother and the place of birth of each parent, since surnames and birthplaces are necessary data in tracing the pedigree of a person through genealogies. If the questions proposed by Mr. Davenport were added to the present schedule it would comprise a total of about 55 or 60 questions. Evidently it is impracticable in the special census of 1911 to obtain the valuable hereditary data so much needed by otologists, ophthalmologists, and specialists in hereditary studies generally. The only possibility of obtaining such data before the census of 1920 is in sending out a second schedule after replies to the first have been received, as suggested by Dr. E. A. Fay. Even if only a portion of the total number should reply, say 50,000, the data would no doubt be the most comprehensive and most valuable ever collated for a study on consanguineous marriage.

The point to be noted is that, although scientists desire the information and the Bureau of the Census is willing to cooperate in obtaining it, method is lacking. A method is here suggested for obtaining the hereditary data at the time of the general enumeration in 1920.

The data from each blind or deaf person should be obtained by the regular census enumerators supervised by special agents rather than through correspondence, in order to insure sufficient accuracy for scientific deductions; for, although the majority of the names of deaf and blind persons are entered on the schedules by the enumerators at the time of the general enumeration, in many cases the enumerator fails to indicate the fact that the person is blind or deaf, frequently because the member of the family whom the enumerator interviews is averse to disclosing the information, but more often because the enumerator, when not receiving extra pay for every blind or deaf person enumerated (as was the case in 1910), omits to ask regarding those defects in his haste to earn money. This obstacle to qualitative work is always present when piece-wages are paid. The plan of paying a premium, or bonus, for every deaf or blind person enumerated does not remove the difficulty inherent in the piece-wage system, however, for in 1900, when the "bonus" plan was operated, the returns were slightly padded, especially in the large cities. Mr. Bledsoe, superintendent of the Maryland School for the Blind, tells of attempting to visit blind persons in Baltimore whose names had been furnished by census enumerators working under the bonus plan, but whose places of residence, as reported by these same enumerators, were in several instances vacant lots, warehouses, and other non-residential locations. Evidently it is essential to a thorough and accurate census of the blind and deaf that the work of the

enumerators should be verified and corrected by special agents working on a time-wage basis. Enumerators must be paid extra piece-wages to obtain quantitative results; supervising agents are necessary to insure quality in the work.

Of course such a method would entail an increased cost of enumeration. Thus, in New Haven, Ct., there were seventy enumerators and two special agents during the enumeration in 1910. In the territory enumerated by these census employees there were found 106 deaf and blind persons. If the enumerators were supplied with special schedules for the blind and deaf and received compensation for the extra work of filling out these schedules at the rate of 10 cents each, the extra disbursements to enumerators in this city would be about $10.60. If the two special agents were employed a few days extra, to see that the data contained in these schedules was sufficiently accurate and complete for scientific deductions, the extra cost of special agents in this city would range from about $50 (6 days) to $75 (9 or 10 days extra). Estimating the total number of blind and deaf in the United States at 150,000, the total extra disbursement to enumerators would be about $15,000. The extra disbursements to the special agents (754 in 1910) would be about $18,000 if retained 6 days extra, and about $27,000 if retained 9 or 10 days extra. A fair estimate would seem to place the total extra disbursement to field agents at about $40,000. The cost would tend to be reduced by the fact that about one-third of those enumerated would be in special schools for the blind and deaf, where institutional officials would cooperate, and also by the fact that the number of blind and deaf in regions where the population is widely scattered and the cost of supervision consequently high constitutes only a small proportion of the total number in the United States.

In this connection, also, it is apropos to indicate the amount of office work that would be eliminated by the method here proposed.

Before the blind and deaf schedules can be sent out under the present system, it is necessary first to transcribe the name and address of each person reported as blind or deaf on the general-population schedules. The work of transcribing these names was begun on July 14, 1910. The work could not be completed until about May 15, 1911, because the force (25 clerks) engaged in this work could not gain access to the population schedules at all times, the desired schedules often being in use elsewhere. The cost of transcription was $8,000. The cost of preparing and mailing the special blind and deaf schedules was $4,000, the time required being nearly three months. Hence before the Bureau of the Census can proceed with the special census of the blind and deaf, it is necessary to disburse over $12,000 and wait until more than a year has elapsed after the date of the general-population enumeration. Meantime large numbers of deaf and blind have changed their place of residence, many of whom it is impossible to locate when the special census is taken. Especially is this true of the negro population, and also of whites who are classed as common laborers. Then, too, a considerable number die in the interim between the general and special censuses.

To sum up: A scientific study of consanguineous marriage is much needed. The United States Census Bureau can obtain the statistics necessary for such a study at the time of the general census enumeration. This method would cost, say, $40,000 more than the present method of obtaining statistics of the blind and deaf by correspondence. This increased cost would be many times offset by the better results obtained by the proposed method. The gains by this method may be specified as follows:

1. More complete and accurate information.

2. An increase in the aggregate number of persons returned as being blind or deaf, if the enumerators are paid extra for this special work.

3. An increase in the aggregate of tabulated results.

4. A valuable addition to the data of social science.

HINTS ON HOW TO TEACH GEOGRAPHY

THE ROMANCE OF THE EARTH, AND THE SCIENCE OF PHYSICAL, POLITICAL, AND COMMERCIAL GEOGRAPHY, AS BROUGHT OUT BY OBJECT LESSONS AND IMAGINARY TRAVELS

BY ELIZABETH H. STRICKLAND
School for the Improved Instruction of the Deaf, New York City

WHAT is geography? Geography is a description of the surface of the earth. What is the capital of Georgia? Atlanta. What are the products? Pitch, tar, and turpentine."

Haven't we all heard questions and answers like these glibly given, and considered satisfactory geography work, even though the pupils had no idea of the methods of obtaining pitch, tar, and turpentine, or of the people and life in that part of the country?

Is it any wonder that many children should dislike this study, or that it should be considered by many as of less importance than history or arithmetic? There really is no one study that can interest and develop both the mental and moral nature of a child *more* than geography.

It is not necessary to quote from Griggs or from Pestalozzi for us to concede that it is not fair to demand that a child give us answers that mean absolutely nothing to him. He has a *right* to know all we can tell him of the "*how*" and "*why*," as well as the "*where*" on this planet on which he finds himself.

How best to teach, interest, and develop him is a question demanding serious attention, and circumstances will often decide for the educator the time and the manner of teaching any subject.

It is necessary, however, to have a very definite plan of the things to be taught, and to follow as closely as may be a schedule of work.

The normal child often picks up quite a little geographic information from the conversation of those around him; but many are debarred from this source of information, not only by deafness, but by having their lot cast among people whose knowledge of things outside their own circle is very limited. Children can usually read a little by the time they begin to study geography, but not enough for them to be able to get much from text-books other than ideas gleaned from the pictures.

There is one thing, however, that all children have in common, and that is a fondness for pets. Through this avenue we are almost sure to reach their hearts. We can talk to a boy about his dog or cat and at once he is interested, and when we ask him if he would like to know about some *other* animals that belong to the "dog family" or the "cat family," he will be glad to learn about the wolf or fox, or the lion and tiger.

By this time he will be anxious for us to tell him about the strange animals he has seen in the "zoo," or at the circus, and will often bring us pictures which he has found.

It is not so important at first that he remember the length or height of an animal as it is that his interest shall be excited and he be eager to know all about it. If we tell a class that the reindeer is from 4 to 6 feet long and 4½ feet high, even though they measure this distance and compare with some other animal they will not care much about this bit of information; but if we tell them about the people of the "Far North," with no pretty homes, no stores, no markets, no carriages, nor cars, they will want to find out how these people live, get clothing and food, and how they are transported from one place to another, and they will never forget the important part the reindeer plays in that dreary part of the earth. As you describe how it gets its food, how it helps men work and gives them milk, how its flesh is used for food, and how the Eskimos make clothing from its skin, their little

faces will glow with interest, and when you tell them of the 70 days of sunshine and equal length of time with no sun visible, showing them a picture of the Arctic region with the aurora, you'll be met with an avalanche of eager questioning. They will simply *demand* that you tell them how this thing can be.

Of course we know that their minds cannot yet entirely grasp the facts of the rotation and revolution of the earth, but this is our time for using an entering wedge and beginning to open their minds to some of the wonders of creation.

Before this they will have learned direction, and will have made maps of the class-room, school-house, and adjoining familiar districts. They also will have some idea of the State in which they live, and will not fail to tell us that the earth is round.

Now let us try to help them understand how it can be light for 70 days in the "Far North" while it is dark around the South Pole.

Children like to pretend. Let us take a rubber ball and sketch the grand divisions of the earth on it, running a hatpin through the center. Call this the earth. Now place a watchman's lantern or a lighted candle on the table and tell them to pretend it is the sun. Put a large star on the north side of the room, telling them that the North Pole must always point toward this star, and that the earth never stands upright. As you slowly move the ball around the light, be careful that they all notice how the light shines north from the Arctic circle, while south from the Antarctic circle there is darkness.

Invite them to your class-room in the evening. (The invitation itself will impress them as something rather important.) From the center of the room have a globe suspended. On a small table put your watchman's lantern or candle. When your pupils are placed so that all can watch, paste a small piece of bright-colored paper in northern Alaska, and pretend it is *John*.

Now turn off the gas and slowly swing the globe around the light, being careful that the North Pole shall always point toward your North Star. It will not take them long to see how it is that John can see the sun when the North Pole is pointed toward the sun, and that he will be in darkness when the earth moves around so that the North Pole is pointing away from the sun.

You'll be more than repaid for the evening you have given them by their delighted exclamation, "I've found out! I've found out!"

In the morning teach them, "The moving of the earth around the sun once every year causes the change of seasons." Of course we do not expect the child to comprehend all that this means to us, but the seed of knowledge has been planted, and as it is cultivated so it will grow.

Let us now cut open the rubber ball on which we have drawn the grand divisions of the earth, and, putting the two halves side by side, show the pupils that this is the same as the map of the hemispheres, at the same time teaching them that "hemi" means *half* and "sphere" means a *ball*, and that the eastern half of the ball contains Europe, Asia, Africa, and Australia, while the western half contains North and South America.

Perhaps at this point some one is objecting to this work being attempted, when we are supposed to be teaching about animals and plants; but long experience has proved that a week or more will be well spent at this time in exciting the child's interest and curiosity, and in giving him at least a faint idea of how and why animals, plants, and people in different parts of the earth differ so greatly.

This is not too soon for them to begin to draw maps for themselves. Have them simply draw circles (hemispheres), with tropics and zones, and be sure they understand that a tropic means a pretended line around the earth, while a zone means land and water between the tropics.

When this is understood, draw North America and South America, having them notice that South America does not

touch the Antarctic circle; that the equator passes through the northern part of South America, while most of Greenland and the northern part of North America lie in the frigid zone. They will now begin to understand the use of maps, and you can give each animal and plant its proper setting.

It is important that children have a great deal of drill on direction very early in their study of geography, using as great a variety of question forms as possible.

At this point many weary hours may be saved the teacher and much confusion saved the pupils if they are taught that "from" *always means away,* or *out of* a place, while "of" means *in some part of* a place. *We* say "Massachusetts is east *of* New York," or we say "Massachusetts is east *from* New York." This seems to confuse our little people, and they are troubled to know if it is right to say, "Massachusetts is east *of* New York," or "Massachusetts is *in the eastern part of* New York." They notice that we use *of* when we mean *away from* a place, and we also use it when we mean *in* a place, and this puzzles them.

Haven't your younger pupils told you again and again that the Gulf of Mexico was in the southern part of the United States, or that New York city was southeast from New York? Don't you think this is largely due to the fact that you have allowed them to use "from" and "of" interchangeably, and have failed to realize the trouble the deaf child has in distinguishing the proper use of the terms?

I have never yet known a class of deaf pupils who did not have this trouble if allowed to use "of," meaning "away from." They may understand the points of compass, but they do not have the language forms clear with which to express relative position.

It is comparatively easy to teach location if we begin with work like this: Is Albany *in* New York State, or *away from* New York State? Is Connecticut *in* New York, or *away from* New York? they will tell you at once. Then for a few days have them write answers to your questions, leaving a blank for direction, thus: "Albany is *in* —— New York State. Connecticut is —— *from* New York State." Very soon they will be able to answer any question you would ask them at this time. If they have learned the points of compass, it will be a very simple thing for them to insert the direction in the blanks, writing, "Albany is *in* the eastern part of New York State. Connecticut is east *from* New York."

When they are a little older, with greater discriminating power, they will pick up the use of "of" themselves. We go *from* New York to Chicago; why not teach the children to say, "Chicago is —— *from* New York," which they *can* and *do* understand, rather than allow their ideas to become tangled by the use of a term which always troubles them?

Try to be sure that your classes *understand* the language which they use. Remember that deaf children have unusual power of memorizing words of which they have not the least conception. If allowed to do this it seriously interferes with their development. A few sentences of simple language which they can understand and use are far better than any amount of subject-matter learned as one would learn the catechism.

To illustrate: A new pupil came into the class when we were studying about wolves. We had talked about them, and had written our simple notes for evening study. Each child was given a book of little animal stories, with the request that something new should be found out about the wolf, and that they should be ready to tell this new thing in the morning.

The morning came with its period for geography, and, after questioning the class on their note-work, I said: "Did you learn any new thing about wolves?"

The new pupil eagerly said, "Yes," and, coming to the front, began: "The habit which wolves have of hunting together in packs proves the truth of the adage, 'In *onion* there is strength.'"

I stopped her to ask:

"What does 'habit' mean?"

"I do not know," came the surprised answer.

"What does 'to prove' mean?"

"I do not know."

"What is 'an adage'?"

"I do not know."

Had the child *gained* anything? I think not.

Of course we all agree that there are certain *definitions* in geography, as in arithmetic, which must be "learned by heart."

We must be very careful about the "myself language"! As far as possible have the pupils use the "five-column system" of language work to correct their own mistakes, as this develops them more than to call their attention to corrections you have made for them.

As soon as an animal or plant is learned, pictures and specimens are shown, and the class writes a story—a topic—about it.

Every week one period is used for tests, the questions being selected from any topic taught: on location of all countries named; on direction, zones, climate, divisions of America, home State, etc. This proves of the greatest value to the pupils.

From the first, as far as possible, use the same terms in your question forms as normal children use, giving simple definitions in parentheses. Thus: Locate Albany. (*To locate* means to tell *where* a thing is.) Define a lake. (To *define* means to tell *what* a thing is.) The *native home,* a *natural wonder,* etc., are explained in simplest language.

When a physical term is used, define it, as, Lake Champlain is between New York and Vermont. (A *lake* is water with land *almost,* or *all,* around it.) In this way pupils gradually get considerable physical geography without any extra effort.

Many times we think our classes understand definitions before they have grasped their significance. Not long ago the question was asked, "What *natural wonder* between Lake Erie and Lake Ontario?" And the answer came, "God wondered."

Again, in our haste we oursevles are careless about defining a term explicitly. In studying about the Amazon one day, we were talking about deltas. When it came to note-work and I was writing how the river deposited dirt at its mouth, I hastily wrote in parentheses, "(To *deposit* means *to leave*)," and continued my notes, thinking all understood. Later I was surprised to have a member of the class write, "I must deposit school next month!"

When we consider the mistakes we make in acquiring a foreign language, we have to admit that we are only "children of a larger growth," and moreover are without the excuse of mistakes that our pupils have.

After the study of plants and animals we take up work on the products and industries of the United States.

Beginning in Maine, with lumber, read all you can find on the subject; then write it up in the simplest possible language for note-work with the children.

First talk with them about it, then question them (orally), then allow them to copy in books your notes from the slate. Show them all the pictures of lumbermen at work, of camps, of transportation of logs to mills, and of machinery for converting logs into lumber or paper. Show specimens of wood. Pretend that you are visiting the camps. Find out how the men cook, sleep, and live all winter.

The children love this work, and let me warn you that if they attend the next "Sportsmen's Show" in town, you'll be deluged with booklets on Maine, with their illustrations of camp life, fishing, and animals of Maine, and they will never dream that they are studying.

We study maple sugar, mining, quarrying, dairy-farming, salmon-fishing, cotton-growing and manufacturing, and in short all the chief productions and industries of the country in this way.

I think that almost all progressive schools of today are supplied with stereopticon views or lantern slides of the

most important things to be taught. We also have fine specimen charts of wool, silk, spices, etc., showing these things in every stage of development. Any druggist will supply samples of medicinal plants for the asking.

Do not feel that it is time lost if you devote a whole period to showing and explaining pictures, for no one thing so impresses *facts* on the minds of our deaf pupils.

After the products and industries are fixed, take your class on a trip to each State in the Union, visiting its capital and chief points of interest. As you give these notes, leave a blank for things you have previously taught. Thus: "The chief production of Pennsylvania is —." This prevents the class from automatic copying while their minds are "wool-gathering."

Occasionally insert a question in your note-work, as, "New York city is larger than Albany. Why is it (New York) not the capital?" Or ask them to guess something, as, "Guess how many hours we can ride on the cars in Dakota and see nothing but wheat?" A few little things like these fix an important fact better than much study.

After we get a fair idea of our own country we are ready to visit others. As Alaska belongs to us, we vote it would be a good plan to go up and find out about it. As it is such a cold place, we must decide about necessary clothing before we start. One class surprised me by walking into the recitation-room arrayed in all the fur and thick woolen clothing they could find, and carrying suit-cases all ready to start for the train. They certainly enjoyed my astonishment as they filed in.

We have railroad booklets and trace the route from home to Seattle. We then sail up the coast, enjoying the wonderful scenery (by aid of pictures). We visit Sitka and Juneau, go up to the gold fields and see how men live and work there, then back and down to Kadiak for salmon fishing and canning, and to the Aleutian and the Pribiloff Islands for seal-hunting. We go north and visit the Eskimos. We are invited to go down into their houses, and we sit on the floor and dip our meat into the same pot of oil, sucking it "with loud satisfaction." If a child laughs he is sure to be rebuked by some member of the class, for have we not learned that it is not polite to laugh at people whose customs seem strange to us, *especially* if they are entertaining us?

When we have rather a good idea of Alaska we come back to Vancouver, and then take the Canadian Pacific Railroad back over the Rockies. Your class will be simply *awed* by the pictures of this grand scenery.

We visit fur-trading posts; we try the great toboggan slides; we visit the Parliament buildings; we learn a bit of the history of Canada as we visit Montreal and Quebec; we sail on the wonderful Saguenay, and at last go through the Gulf of St. Lawrence, touch at Newfoundland, stop a day in Halifax, and then down the coast to New York.

We now draw a *map* of the countries visited, locating chief capes, seaports, rivers, mountains, and important cities, after which we write a letter telling about our trip and the things that seem the most interesting and important.

Keep in mind that our deaf need language drill first, last, and all the time, and do not lose this opportunity to help them express the ideas which they have gained.

We are supposed to stop in New York and rest a while after our Alaskan trip, while we replenish our wardrobes and make our preparations for a visit to some foreign land.

We find out that passports are necessary, and get them from the Secretary of State, and we are much interested to see what they are like.

We also find out that the money used in different lands is not like ours, and we get a letter of credit. (Any steamship agent will send a fac-simile.) We pack our trunks, discarding unnecessary things. We have diagrams of ocean steamers and select our state-rooms. We look up the distance from New York to

the port to which we expect to sail and the probable length of time we shall spend on the ocean. We find out through what waters we must sail. We find out the things our country sends to sell to the people whom we are to visit, and also what we import from their country.

When all preparations are completed we sail out into the Atlantic. Shortly we come to the Gulf Stream and find out that it pushes our boat north, and that boats sailing south do not keep in this current, because their progress would be much retarded.

We have a storm at sea, when everything is securely fastened to prevent injury to passengers and when some of us would like to "get out and walk"; but at last we see Gibraltar, and later the beautiful Bay of Naples.

We are surprised to find that although we are about the same distance from the equator as New York, yet the climate is milder and the products very different, and we find out the cause.

We get a general idea of Europe by drawing an outline map, naming all water boundaries and then adding rivers, mountains, and chief cities. We do not draw by scale, and I have no hesitation in saying that some of the maps are "fearfully and wonderfully made"; but so long as relative direction and size are fairly good they are accepted.

We are ready now for "sight-seeing." We go to the chief centers of Europe and visit the most famous palaces and museums. We are invited to the homes of the rich and the poor, and find out how they live, eat, sleep, work, dress, study, and worship.

We go from one place to another, buying embroideries or jewelry in Switzerland, laces in Brussels, and gowns in Paris, and at last return to New York, where we "declare" the amount of goods we have purchased, and the customs officers examine our trunks while we impatiently wait for them to finish, that we may go home.

It is in this way that we take trips all over the world.

Children enjoy these pretended trips more than fairy tales. Show lantern slides, stereopticon views, souvenirs (which you may borrow if you do not possess), clothing—in short, everything you can relating to each country you visit. Make everything as real as possible to them. If you have acquaintances sailing up the Nile or climbing the Andes, tell your class about them, or read parts of their letters to them, and see how eagerly they will (listen) *watch* for any news of them.

You'll be amply repaid for this kind of work, for not only will your pupils have learned political, commercial, and physical geography, but they will have a very definite idea of the great brotherhood of man, and that no one nation, any more than one man, can live to itself alone and hope to be prosperous and happy.

Sometimes the question is asked: "Couldn't you get as good results if the pupils used text-books without notes?"

So far as I know, there are no geographies published with the facts presented in simple, direct, interesting statements for the average deaf pupil to hold, without the explanation of some sentence or word on each page. People outside of the profession seem to have no conception of the terrible handicap it is to be unable to hear how others use the terms which they themselves have heard and used from infancy.

Open your geographies almost anywhere and notice how few paragraphs you will find with language clear cut enough for our pupils to grasp at a glance. It is easy enough for them to understand after reading two or three times, or having an unfamiliar term explained; but it is not a child's nature to work on obscure or involved language and really enjoy it and want more!

I open to Brazil and read, "Rio de Janeiro, the capital of this republic, is on a deep and spacious harbor, sheltered by hills. It is near the coffee district and is the largest coffee market in the world.

"Bahia, a large port northeastward from Rio de Janeiro, resembles the latter in its foreign trade."

While our pupils can easily understand and memorize this, and probably give correct answers in their examinations, how much does it really educate and develop them?

Try the other method. Pretend to visit Brazil, and be the guest in some hotel in Rio. Pretend that some man tells you how the Portuguese first found the place in January, and, thinking the bay was the mouth of a river, they named the place "River of January" (Rio de Janeiro). Find out just enough about Dom Pedro to want to know more. Go back into the "coffee lands" and let them see, by the aid of stereopticon views, just how coffee grows and is prepared for market. Return to the city and watch men loading it on ships from Hamburg, Liverpool, Lisbon, or New York. How many of them will ever forget where much of our coffee comes from?

Go up to Bahia, and see their astonishment when they learn that the archbishop of the province and the editor of the daily paper are negroes, and that we find negroes at all hotel tables. Take them back into the country and watch the miners diving down to the beds of the streams to scoop up gravel containing diamonds; then follow the men to find out the result of their work.

In this way they not only remember the location of places, but also the things best worth knowing in regard to them.

Are you thinking that it means too much work to prepare interesting note-books on each country to be taught? It does take considerable reading, study, and thought to select and put into simple, direct language the facts most important and interesting; but you'll become so absorbed in the work, when once you have begun a country, that you'll never be satisfied with any other way of teaching the subject, and while you will give your classes geographies for maps, references, and supplementary reading, you will depend on your own note-books for their development.

In conclusion: do not be disturbed if some one comes into your room and asks your class questions which they cannot answer. Remember the world is large, and however much we learn about it, there are more things left to be learned.

It is a very mediocre man who cannot ask some question about the earth which it would puzzle his superior to answer.

It will be a comfort to you to know that your pupils, if taught by the method suggested, can successfully pass the grade examinations, even though they may not be able to tell the length of some river or the height of some mountain about which a visitor may question him.

You will also have the satisfaction of knowing that not only have you been teaching geography, but that you have had a share in the great work of character building, which is of far greater importance.

TWO WAYS OF USING THE FIVE-SLATE SYSTEM—I

Miss Katherine E. Barry, developer of the five-slate system, sends the pictures on this page and the next, with the following explanation:

"Clearness is an essential factor in the development of language construction; clearness of thought, action, and expression. In the employment of the five-slate system we endeavor to keep this quality of clearness always in mind, to present everything so simply as to bring it within the apprehension of the slowest child in the class. The accompanying pictures illustrate the method of teaching the prepositions *in* and *into,* by showing objectively and concisely that *in* is used with verbs of rest and *into* with verbs of action.

"Slate No. 1, on this page, is used for all active and all transitive verb constructions. Slate No. 2, on the page opposite, is used for the incomplete verb constructions."

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TWO WAYS OF USING THE FIVE-SLATE SYSTEM—II

LIP-READING FOR DEAF CHILDREN[1]

BY MM. L. DUPUIS AND A. LEGRAND, PROFESSORS IN THE NATIONAL INSTITUTION FOR THE DEAF, AT PARIS, AND MEMBERS OF THE COMMITTEE OF THE INTERNATIONAL BULLETIN

TRANSLATED BY SUSANNA E. HULL

Member of the Association's Advisory Committee; Co-Editor of "The Teacher of the Deaf"

THE great pains that we take to avoid the admission into our collection of any expressions but such as are well known and are universally used can be fully justified. Let us picture to ourselves, for example, a deaf child forced to read from the lips some expression he has not been taught, or, if you prefer it, that he has not met with in his conversations with others. In what an annoying position he would find himself if the person addressing him were a stranger! On the one hand he has to discover the sense of a novel expression, on the other he has to wrestle with the difficulties a fresh face always presents to a lip-reader. Is it not our duty to lighten his task? He will always have plenty of obstacles to overcome.

At the point at which we have now arrived we can draw from our study its legitimate conclusions. We have shown in what fashion we make lip-reading intervene in our initiatory lessons. If we have to some extent made lip-reading subservient to language, that does not imply that by this means only we succeed in studying all the difficulties of a visual order over which the pupil must triumph.

The habit of interpretation necessitates special exercises. These exercises can be composed only by drawing upon the deaf pupil's knowledge of language. We are therefore compelled to provide this in the first instance before we dream of calling our pupil's attention to all the inherent difficulties of lip-reading. We are thus led to ascertain the irresistible necessity for a graduated course of lip-reading distinct from the language course.

From the first year the phonetic elements have been separately studied. Syllabication has permitted of various duplications. The reading of the first words even has been possible. In other words, analytic lip-reading has occupied our attention during the period of the development of speech. We have no need to go over this again here. Nevertheless we must give it place at the entrance of our graduated course of lip-reading, in order to keep our pupil's mind on the alert, and to complete the study of certain syllabic combinations on which it is necessary to insist. In fact, we do not pretend to affirm that we never utilize any analytic process after the period of speech development is ended. Whenever our pupil stumbles over a difficulty in the body of a word, or in a member of some sentence, we need to note it in passing, in order to make it the object of a special exercise in our lip-reading course.

Again, in order that our pupil should read synthetically and that by mental substitution he should be able to overcome the greater number of the obstacles that he meets, it is both useful and even necessary that he should know how to analyze.

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[1] From the International Bulletin of the Education of the Deaf; concluded from THE VOLTA REVIEW for November, 1911, p. 353.

This being admitted we can give a list of the exercises of such a course as we conceive to be advisable, taking this opportunity of calling attention to the fact that the order adopted is not unchangeable; that it is, indeed, of great advantage frequently to go over again the various parts of the course. We shall thus have:

First, reading of the phonetic elements in groups of characters that appear similar, with the object of enabling the pupil to choose correctly among words that might be confused one with the other. Example: *p, b, m; t, d, n; a, an; o, on,* etc.

Second, exercises in syllabication and nomenclature of the first year reviewed and completed.

Third, the study of difficulties arising from the juxtaposition of consonants in the linking together of words.[2] It is needless to say that we carry on this study by making use of the ordinary forms of speech with which our pupils are acquainted.

Fourth, to recognize by the context, in a series of detached sentences, words formed from elements belonging to the same group; *e. g.,* give a sentence including the word "pelle," and another with "belle;" another phrase with the word "pêche," and yet another with "bêche;" one with the word "épi," and another with "épée," etc.

Fifth, one word being given, exercise the pupil in discovering what other words of like form and movement are likely to be confused with it; *e. g., malade, ballade, parade, baleine,* etc.

Sixth, rapid dictation of lessons previously studied. We remark in passing that the lessons to which we here refer are studies in vocabulary or on the forms of the sentence peculiar to the French language.

Seventh, the reading of exercises composed of sentences previously studied, but which have been modified to such a degree as to exercise the pupil's intelligence to decipher them. In a lesson a pupil has been led to say in reference to a real occurrence: *jè n'ai pas besoin de lunettes; jái de bons yeux.* Here we have a perfect model on which to form numerous sentences of similar contexture: *jè n'ai pas besoin de cahier; j'en ai un,"* etc.

Eighth, rapid dictation of detached sentences belonging to every-day language.

Ninth, study of the syllabic combinations at the commencement of a sentence. We have often remarked the difficulty that lip-readers have in deciphering a sentence spoken unexpectedly. The aim of this exercise is to make this task easier to them. Take, for example, the consonant *p.* We make use of it in starting each of a number of sentences, adding to it in succession all the elements that can be combined with it; we thus obtain sentences beginning with *pa, pla, pra, po, pro,* etc.

Tenth, rapid reading of usual expressions concerning a given subject; *e. g.,* a pupil remarks that his brother has a hat that he much admires. Immediately a number of ideas suggest themselves to his mind: "Where did you buy it? How much did it cost? It becomes you. I shall get one like it," etc. Inspired by the working of this association of ideas, we compose exercises on similar lines that prove most useful to our pupils.

Eleventh, a fairly complex sentence being rapidly dictated and not arousing a true idea of its subject, we immediately supply expressions of like meaning but of simpler construction. The need of this exercise

[2] See *Syllabation et Phraséologie,* par B. Thollon.

is demonstrated whenever we initiate an adult deaf person into the art of lip-reading. Should he come to a standstill at some member of the sentence, we carefully avoid repeating it. We prefer to make use of other expressions suggesting the initial one. The pupil is thus induced to read several sentences in place of one only. Light dawns on his mind without fatigue, and instead of doubting his own powers, he is more and more convinced of the efficacy of lip-reading. Moreover, what physiognomy would the sentence retain if we stopped at a certain word and repeated it over and over again? By the time the word was made out it would be useless to complete the sentence, for the impressions made at its beginning are already effaced.

Twelfth, recite several anecdotes and then require their repetition by word of mouth.

As regards this exercise some explanations should be given. During the whole of the first year we require the pupil at once to repeat, word for word, whatever he reads. Should this procedure continue for a long time? We think not. It is our duty to accustom our pupil as soon as possible to reply to a question, for example, without repeating the question itself. In a general way it is advisable to get him to seize the proposition as a whole; his attention should not be distracted by requiring him to repeat the exact words dictated to him; such an analytic process is incompatible with normal utterance as we have already shown. The reading of a sentence as a whole is indispensable to the reader to enable him to interpret as well as to correct the erroneous information his unaided eye affords him.

Thirteenth, idioms, proverbs. The frequent repetition of expressions which are so constantly employed will end in graving deeply on the child's mind their corresponding meaning.

Fourteenth, write on the blackboard fragments of sentences, taking care to supply only such portions as would be easily visible to a lip-reader. The pupil has to fill up the gaps. We are not dealing here with sentences that have simply to be completed. The fragments we mean really resemble bits of words, and even groups of syllables belonging to different words.

Fifteenth, the importance of an expressive face no one can deny. Many ordinary formulas separated from their context would be "all but incomprehensible without the natural facial expressions which usually accompany them" (Mrs. A. Graham Bell). We therefore select little scenes in dialogue form into which we can introduce expressions that interpret interrogation, doubt, surprise, anger, supplication, defence, lassitude, injunction, etc. If the teacher of the deaf must be temperate in his use of gesture, mobility of countenance is not denied him.

Sixteenth, in a chapter entitled "Emphasis," Arnold shows how the deaf can take account of the oratorical, or, as others call it, of the logical accent which marks the more important word of a sentence. As an example, he has chosen a particularly happy illustration. It is a simple question, requiring different replies according to the place marked by the logical accent. We give the translation:

1. Are you going to town *today?*
   No; I am going *tomorrow.*
2. Are *you* going to town today?
   No; *my brother* is going.

3. Are you going to *town* today?
No; I am going into *the country*.

Although we allow that this exercise is specially applicable to the more advanced of our pupils, we still think it should have its place in a graduated course for teaching lip-reading.

CONCLUSIONS

I. Lip-reading is the fundamental principle of the oral method.

II. The aim of lip-reading is to establish speaking relations between the deaf and persons who hear.

III. Instruction in lip-reading is seen in two very distinct phases:

1. As securing intercommunication between teacher and pupil, (*a*) in the development of the voice, (*b*) in the teaching of language.

2. As permitting everybody, though strangers in the school, readily to enter into communication with the deaf child.

IV. The power of analytical lip-reading has been exaggerated. The data of the problem of synthetic lip-reading have been badly laid down. There is need of an adjustment of the focus.

V. From the aim that we assign to lip-reading we are necessarily forced to train our pupils to read speech as it is commonly seen spoken.

VI. The facial alphabet of persons who hear is expressed in limited and rapid movements, and sometimes in such attenuated forms as altogether to escape the eye of the lip-reader.

VII. It is important (*a*) to accustom the pupil to seeing only such visual appearances in lip-reading as he is likely to have the chance of finding again; (*b*) to watch that he himself keeps up an agreement between the visual appearances he assimilates in lip-reading and his own motor impressions of the same articulations; (*c*) to develop the pupil's faculty of interpretation, made requisite by the presence of similar elements; (*d*) and to give the pupil a knowledge of language extensive enough to make the exercise of his faculty of interpretation of real service to him.

VIII. The practise of lip-reading being dependent on a sufficiently extensive knowledge of language, an essential question presents itself, namely, the method of initiation to which we must have recourse in our lessons upon the French language.

IX. The preliminary introduction of lip-reading in the first presentation of lessons is fatally likely to introduce numerous errors of interpretation.

X. To avoid these errors we must have recourse either to exaggeration or to writing. We prefer to employ writing, which from the first year of instruction appears to the pupil as the strictly accurate representation of speech.

XI. It is of the utmost advantage that the pupil in his reminiscences shall recall the visual appearance of spoken language, which he can unite with the precise and complete impressions he has of his own articulation. He cannot do this unless we develop in him the remembrance of his motor impressions of articulation together with the written forms of speech.

XII. When the pupil's utterance has become rapid enough, we then introduce lip-reading.

XIII. In time the motor impressions of articulation, the visual ap-

pearances of speech, and the written forms end in becoming thoroughly associated with each other without allowing too great a preponderance to the written forms. The spontaneity of utterance is by this means facilitated.

XIV. The importance of this primary presentation in written form decreases in proportion as the pupil's command of language increases and as his faculty of utterance is perfected.

XV. The extreme slowness of the first attempts, as well as the exaggeration of the positions and movements, alike misrepresent the visual appearances seen and the motor impressions felt by the pupil who endeavors to reproduce what he sees. Without denying that some slackening of speed is necessary, which it is well to get rid of as soon as possible, it is important that this slower speech shall not sensibly change the physiognomy of the sentence.

XVI. In each several school it will be advisable to draw up a language course, in the formation of which all the teachers shall take part, and which shall indicate the lowest amount of the knowledge of language to which the pupils shall be expected to attain. This applies to a course of ordinary, every-day language, not to a grammatical course as such.

XVII. If we contented ourselves with exercising the pupils in the practice of lip-reading, employing lessons in language only, we should run the risk of encountering all the difficulties of a visual order which the pupil ought to conquer. It is expedient, therefore, to make a methodical study of these in order that we may be assured that no essential detail has been neglected. Hence the need of a graduated course of lip-reading, to be continued throughout the whole course of their education.

(The end)

REMINISCENCES OF A RETIRED EDUCATOR

BY RICHARD ELLIOTT, M. A., L. H. D.,
Sometime Headmaster of the Royal School for Deaf Children, Margate, England

XXII

THE THIRD INTERNATIONAL CONGRESS

THERE is still another conference to notice. Certainly, in regard to the education of the deaf, there was at this time no "stagnation" to complain of. The gathering I now mention was the Third International Congress, which met at Brussels from the 13th to the 18th of August, 1883, under the presidency of Monseigneur Canon de Hærne, Frère Cyrille being secretary. The congress was well attended, recognized by the Belgian government, and would have been opened by the King in person but for a mistake made as to the time of the meeting. He was, however, present at one of the sittings. The fine hall of the Palace des Acadamies, which was formerly the palace of the Prince of Orange, was granted for the use of the congress. The proceedings were actually commenced by a fine address, given by the president.

The King attended the next session, in state, and was received with the most lively acclamations. The president explained, in his address to the King, the points in the subject—Normal Schools for the Deaf—discussion of which had actually begun. In it he gave fully the views expressed by the English headmasters as set forth at what he called "the important conference lately held at Doncaster." Having been intimately connected with the work, as carried on in England, through the Boston Spa Institution, of which he was the founder, he was led to give importance to English opinion and practise.

At this congress, however, as at the one preceding, the English-speaking section was again weak in numbers and not much otherwise in evidence. Except the Rev. Thomas Arnold, who spoke at length on several occasions, they were able to take little part in the proceedings. On the subject of trade-teaching, I find in the report a little more than a page recording my observations. On other matters I had been invited to speak, and had sent up my name to do so, but the *cloture* was called and the discussion came to an end before my turn came. This doubtless was the case with other intending speakers in our body.

The discussions were very discursive, and great latitude was allowed to speakers as to the relevancy of their remarks to the subject ostensibly under consideration. No discussions as to the systems, however, took place. That matter was assumed to have been settled by the former congress. On the whole the enthusiasm and unanimity, so manifest at Milan, was absent at this gathering; there seemed to be a sort of undercurrent of irritability among the members. Hostile elements were present in the form of advocates, respectively, of the clerical and secular views on education, which were so bitterly contested in Belgium at this time. Further, there was not an inconsiderable number of French and Germans present, and these did not appear to have fallen, as yet, into anything like harmonious relations. Contentions and wrangles broke out from time to time, which tried the patience of the amiable president very considerably. The King's presence, even, did not prevent one of these "scenes" from occurring, and he was reported to have exclaimed that the specimen of such amenities he had "assisted" at reminded him strongly of similar "scenes" in his own Parliament.

The congress broke up in a tumult of wild confusion, said mainly to have been due to the decision of the International Committee to hold the next one in a German town. Energetic protests were noisily offered, and, the ruling of the chairman being entirely disregarded, he was advised, in order to put an end to the clamor, to declare the congress closed, which he did. An address for the closing exercises which he had prepared was not delivered—it was printed in the report—and none of the usual complimentary votes of thanks was proposed. A committee to arrange for the next International Congress had been previously elected by the members present of the several nationalities. Those chosen for England, in the order of the voting, were Messrs. Elliott, Ackers, and Buxton, but their further services were never put in requisition.

The conclusion I came to in regard to the former International Congress was fully confirmed by the present one, namely, that a gathering of delegates speaking different languages can do little in the way of elucidating educational questions by their discussions. Nevertheless, there can be no doubt that the gathering together of various workers,

the exhibition of results offered, and the general attention the meetings call to the work in general are a useful stimulus to progress; and, further, to those attending, the occasion forms a pleasant reunion, and gives the opportunity of forming useful and desirable acquaintances and friendships, which cannot but be of benefit to the cause.

XXIII

SCHOOL ADMINISTRATION AND RELIGIOUS INSTRUCTION

ON MY return work was resumed in the two branches of the institution—the specially oral instruction at St. Lawrence and that by the combined system at Margate.

Various measures, which have come to be regarded as important in our work, had engaged attention and had been adopted. Among these were periodical meetings of the teachers to discuss matters connected with education. These were resumed after having been organized some time before. Observation lessons were given beyond the school premises from time to time, and, with the assistance of some of the teachers, I frequently took some of the children, by train or otherwise, to visit interesting localities in the neighborhood. While the school was in London there was the choice of the sights of the metropolis and its environs; at Margate our frequent and great resort was the historic city of Canterbury, with its grand cathedral.

In regard to the teachers' meetings, I found them useful and interesting to all as long as the whole ground for discussion was comparatively untrodden and the novelty lasted. After a time slackness came on and outside influences proved more attractive, even to those who had taken up the meetings with zest and eagerness; and, the common course of human nature asserting itself, they fell through. To continue them regularly and successfully, they should form a part of the school time-table. We had, during my tenure of office, several lapses and several renewals of these useful conferences. In them my memory goes back to a number of valuable papers read and interesting discussions held at our evening meetings.

The employment of time by our children on Sundays, as well as their religious training, was always a matter of deep concern to me. My view is and was, that education in all cases should be based upon religious principles; and as our children are outside such influences as may aid the normal, it appeared to me that a great responsibility rested on those who had charge of their education, to see that the wants of their spiritual nature were provided for, as well as those which concern this life. During the time of my earlier engagement nothing was required on Sundays of them beyond attendance twice at church at an ordinary service, which had little or no significance to them, and in the evenings a portion of Scripture was "signed" to the senior class and to as many as chose to look on.

On my taking charge, in addition to attendance once at church, it was required that a short special service for the children should be held on each Sunday. This latter I at once took up, and I hold it to be quite necessary, both from a religious and also from an educative point of view. I look upon attendance at the ordinary church service to be equally important for those brought up in an institution; for when they leave its care many of them will pass their lives where a

special service cannot be provided. Also to induce the habit of attending divine service is most important. With a liturgy and the Bible, equally available in worship to the deaf as the hearing, their only deprivation in joining in ordinary worship will be the sermon, and the loss of this is not always a very serious one. In order that they may join intelligently in the worship, they must be instructed in the meaning of the words of the service. To provide for this, explanation in our case was given to the elder children in the Sunday school.

In further reference to the question of the provision of religious ordinances, I may here mention that in 1882, with the sanction of my committee, I arranged that the pupils who desired, and whose friends approved, should have the opportunity of partaking of the rite of confirmation before they left the care of the institution. I undertook to prepare them for it, and wrote a course of simple lessons to aid in that purpose. This preparation I continued until I left, and during that period prepared and witnessed the confirmation of over one thousand candidates. I attribute, under Divine Providence, a good deal of the excellent spirit and good conduct which prevailed among the elder children to the influence which the preparation for and the administration of confirmation, at this critical time of their lives, had upon them. There was much earnest endeavor and real desire on their part to learn and do their duty, and this manifested itself without any accompaniment of undue or morbid excitement. In every case the request was made to be included in the preparation quite voluntarily, and a written permission or request from the parents was required previously to participation in the rite. It was very rare that there was a want of inclination on the part of the one or the other to this end; but, on the contrary, so far as could be judged, great and real anxiety to participate in so appropriate a termination of school life. I look upon my connection with this work as one of the most happy, as it was, I trust, one of the most useful, of the duties I have had to perform.

I took an early opportunity of forming a library, and of taking such steps as I could to induce a habit of reading among the elder pupils. A good number responded well to our efforts in this direction; but I have always found that this is generally one of the most difficult things in their education to lead the deaf to; and the tendency of the extension now forced upon us, in the way of industrial occupations and organized play, does not give much hope of or scope for improvement in this respect.

With the view of fitting the elder children for their entrance into the realities of life, by as much participation in it as their residence in an institution admitted of, I endeavored to provide that, under certain regulations, they should be permitted to go outside unattended, for walks, errands, etc. This, however, the committee objected to, as dangerous, and I was not able to overcome their objection until long afterwards. An arrangement for the encouragement of thrift, by giving the opportunity to save in the post-office savings bank, was approved, and the majority of pupils availed themselves of it.

(To be continued)

DR. S. G. HOWE'S CONNECTION WITH ORAL WORK

To the Editor:

In the March number of The Volta Review you reviewed "The Servant of Humanity," the Life of Dr. Samuel Gridley Howe, by his daughter, Mrs. Laura Richards. Your opening sentence reads: "Twenty-two years before the founding of the first[1] extant school for the deaf in this country, Samuel Gridley Howe was teaching the deaf to speak, being the first American systematically, successfully, and continuously to carry on the education of the deaf by speech methods alone."

Your statement, I see, is derived from the quotations you make from pages 169–171 of "The Servant of Humanity." In the quotations from these pages Mrs. Richards says: "My father's way of meeting the opposition was characteristic. Finding that he could make no impression on the Hartford people by speaking or writing, he proceeded to demonstrate the truth of his proposition; he took two little deaf-mute pupils and taught them articulation with swift and absolute success." This must have happened, if at all, before January, 1845, twenty-two years before Clarke School was founded, in 1867.

How such an error, for such it most assuredly is, can have crept into Mrs. Richards' book, I think I understand. There were two families that I knew in which a daughter lost hearing between four and five years of age, when both children were, of course, talking. These children were Mabel Hubbard, of Cambridge, Mass., and Jeannie Lippitt, of Providence, R. I.

Hon. Gardiner Greene Hubbard, father of Mabel, was the first president of the Clarke School at Northampton. In his first report to the Board of Education, January, 1868, which had asked for some account of the origin of the school, its purposes and aims, he says: "The ablest friends the deaf-mutes have had in this State were the Hon. Horace Mann and Dr. S. G. Howe, co-workers in many benevolent efforts. The attention of Dr. Howe was especially directed to the subject of deaf-mute education through his interest in two deaf, dumb, and blind pupils, Laura Bridgman and Oliver Caswell, who were taught with great success, from 1837 to 1845, by the finger alphabet. . . . Two deaf-mutes were also taught by Dr. Howe by the same method. One of the teachers employed in this work was Miss Rogers,[2] of North Billerica." Mr. Hubbard then speaks of the meager results from the efforts of Horace Mann and Dr. Howe to bring about a change of system in the schools then established in the United States. "But the labors of Dr. Howe and Mr. Mann were not fruitless. From time to time, the attention of the public was called to the subject; and a few parents, whose children had lost their hearing, were encouraged by Dr. Howe to persevering efforts to retain the articulation of their children and teach them to read from the lips. The President of the Clarke Institution was among this number. He desired that others should share in the benefits his daughter had received, and applied to the Legislature of this State, in 1864, for a charter for a deaf-mute school. In this application he was greatly aided by Dr. Howe; but the effort failed."

From a much later publication, "Dumb No Longer,"[3] page 27, I quote:

"Searching for helpful aids, Mr. Hubbard found a copy of an official report, made in 1843, by Horace Mann, then secretary of the Board of Education of Massachusetts, giving a brief account of the oral method used in the education of the deaf in Germany, showing its superiority to the sign-language, and strongly advocating its adoption in this country as beneficial to humanity as well as to deaf children. Mr. Hubbard also learned that Dr. Samuel G. Howe had accompanied Horace Mann in his visit to the German schools, and turned to him for help. Dr. Howe said that even children born deaf could be taught to speak, encouraged the parents to talk as much as possible to Mabel, and to teach her to read the spoken words from the movements of the lips and vocal organs. . . . Mabel's instruction along the lines laid down by Dr. Howe were patiently and intelligently continued. Fortunately, the parents secured the services of an excellent assistant, Miss Mary H. True."

I have spoken of the two children, Mabel Hubbard and Jeannie Lippitt. Mrs. Henry Lippitt, Jeannie's mother, in a letter to me dated February 27, 1867, says: "We used no means except articulation from the commencement, being particularly directed in this by Dr. Howe." Both these children were successfully taught in their homes, but their parents were greatly helped by Dr. Howe's advice and encouragement. Doubtless these are the two children who have been accredited to Dr. Howe through some misunderstanding. They were not deaf-mutes and never came under his personal care, but through his help were saved from becoming deaf-mutes. They were successfully taught at home.

Notice that Mr. Hubbard speaks only of what Dr. Howe tells him he saw abroad. Had Dr. Howe had any personal experience in teaching the deaf by articulation he would certainly have given it to Mr. Hubbard and Mrs. Lippitt and they would surely have mentioned any help Dr. Howe gave them. In Mr. Hubbard's first report of Clarke School he says, in effect, that Dr. Howe taught two deaf-mutes by the finger alphabet. These were probably Frank and Susan Worcester, whom I knew from the

[1] Clarke School at Northamoton.

[2] Sister of Harriet B. Rogers, of Clarke School.

[3] Washington, D. C.: The Volta Bureau, 1908.

time they entered the Perkins Institution until their death. Neither of them ever spoke a word, nor to my knowledge, ever attempted to speak. They were at the Perkins Institution two years and one month. This must have been during some part of 1842–3–4, as they entered the school at Hartford in January, 1845. Of this time Dr. Howe was abroad from early in May, 1843, to some time in September, 1844, more than half the time these children were at his school.

Mary Swift (Lamson) was a teacher at the Perkins Institution from 1840 to 1845, Sarah Wight (Bond) from 1843 to 1850, and Eliza Rogers was a teacher there in 1843 and 1844. Miss Swift and Miss Wight were very intimate friends of my sister, and had there been any experimenting with articulation between 1840 and 1845, my sister would have known of it and would never have allowed me to struggle on, as I did, with my first pupil, had there been any experiments to fall back upon. We only knew that in Germany the deaf were taught to speak.

The twelfth annual report of the Perkins Institution for 1843, written by some members of the corporation during Dr. Howe's absence, says: . . . . "a few words must be said with regard to the two deaf and dumb children who joined our school about a year since, at the early age of seven years. . . . The success which has attended the plan of instructing Laura by the finger language alone, has induced the instructor of these two deaf-mutes to teach them language only by the finger process, intentionally avoiding the use of the gesture language taught at institutions for the deaf and dumb. . . . These two children have been under the charge of the same lady who devotes herself to Oliver."

After careful investigation, there seems to be not the least evidence that Dr. Howe ever made any experiments with articulation.

Another of your quotations from Mrs. Richards' book is this: "My father's experiments in teaching articulation led to the establishment long after, at Chelmsford, near Boston, of a small school devoted to this method of instructing the deaf."

I knew all the initial steps in the starting of the little Chelmsford school, and I feel that to Mr. Hubbard should be given the credit for this work, although he always freely acknowledged the inspiration he received from Samuel Gridley Howe.

HARRIET B. ROGERS.

North Billerica, Mass.

A Letter from Mr. Sanborn

TO THE EDITOR:

By a double inadvertence, for which I hold myself responsible—first in the proofreading of the second volume of "The Life of Dr. S. G. Howe," by Mrs. Laura Richards, and again in your notice of that book in THE VOLTA REVIEW—a claim was made for that philanthropist which he would have been the first to disavow. It was said or implied that he had taught speech to the deaf-mute in two instances before 1866–67, when Miss Rogers at Chelmsford began systematic instruction of deaf children by the oral method. So far was this from the fact that, in the legislative inquiry about methods of deaf-mute instruction in the Massachusetts session of 1867, Dr. Howe informed the committee, and stated in speeches that, though the oral method had been found feasible in other countries, and a few instances of its use had been found in New England, he had not himself practised by that method; while Miss Rogers had not only used it, but had succeeded with it at her small school. *This I heard him say.* She was the first school teacher in this country to demonstrate to the State authorities of Massachusetts, and afterward to the world, that what had been found practicable in Spain in the early seventeenth century, and in Germany and elsewhere in the eighteenth, was not only feasible, but had been done in Massachusetts.

A correction of this error is due not only to Miss Rogers, and the Clarke School, which Doctor Howe lived to see firmly established and endowed, but to the memory of the Doctor himself, who, of all persons, was the least likely to claim as his own achievement what had been the work of others. The mistake seems originally to have sprung from the fact that in 1843–44 he did have two deaf-mutes taught the *finger alphabet* at his school for the blind in South Boston. These afterwards entered the Hartford school and were taught the sign language. Knowing the facts in the case, I ought to have corrected the error in the proofs, but it escaped my notice.

F. B. SANBORN.

Concord, Mass.

Mrs. Richards's Correction

TO THE EDITOR:

My attention has been called to the fact that in the "Journals and Letters of Samuel Gridley Howe" (Vol. II, "The Servant of Humanity," pp. 169–171) I make a claim for him which he never made for himself; that of having been the first, or one of the first, in this country to teach articulation to deaf-mutes. Nothing could be further from my thoughts or wishes than to make any statement which is not borne out by the facts, as nothing would have been more abhorrent to my father than to claim any credit which was not rightfully his.

In my mother's "Memoir of Dr. S. G. Howe," written immediately after my father's death in 1876, she says (pp. 37–39):

"On the occasion of the European tour already chronicled (1843–1844) Dr. Howe and Mr. Mann became greatly interested in the method, then already established on the Continent, of teaching deaf-mutes the use of articu-

late speech. The two friends visited together all the schools of this description which lay within their line of travel. . . . In Switzerland and in Germany the system had already been fully tried and established, and in these countries we found opportunities of observing pupils in every stage of vocal discipline, from that of the simultaneous utterance of unintelligible sounds to the very politeness and perfection of speech.

"On his return to America Dr. Howe warmly seconded Mr. Mann's efforts for the introduction of the teaching of articulate speech as a part of deaf-mute education. The innovation was strongly resisted, at the time and long after, by those committed to the old method of instruction. . . . Unable to convince the heads of the American Asylum for Deaf-Mutes at Hartford of the propriety of at least giving the new method a fair trial, Dr. Howe began upon two little deaf-mute pupils a series of experiments which finally had some share in leading to the establishment, in the neighborhood of Boston, of a small school devoted to the articulate method of education, whose teacher has since become the principal of the Clarke School for Deaf-Mutes in Northampton. In the interim (one of many years) between his first efforts to this end and their final success Dr. Howe was instrumental in leading many mothers of deaf-mute children to conduct their education upon this principle. In these instances the children received the greater part of their education at home. I have seen several of them, grown men and women, able to mingle in society, and to take part freely in conversation. These young persons, as well as their parents, expressed great gratitude to Dr. Howe for the good advice given at that time in opposition to popular opinion and prejudice."

This statement has stood unchallenged for over thirty years, and as my mother took all possible pains to be accurate in the preparation of the memoir, I cannot doubt that it is substantially correct. The mistake which I now perceive myself to have made, and which I hasten to acknowledge, was in inferring from the above-quoted passage that the children in question were actually taught articulation by my father. This, Miss Rogers and Mr. Sanborn are positive, was not the case, and on rereading my mother's statement carefully I perceive that her words do not directly warrant my inference, though I still think it a natural one, especially when taken in connection with Dr. Gallaudet's remarks quoted by me on page 170 of the "Journals and Letters," and with the declaration of the Rev. Collins Stone, Principal of the Hartford Asylum for Deaf-Mutes (in his report of 1866), that "on the side of educating deaf-mutes by signs we find every teacher in this country and in the British Isles, with the exception named. . . . On the side of teaching by articulation, we find Dr. S. G. Howe."

I shall take pains to correct my statement in the second edition of the "Journals and Letters." Meantime, I can only express my deep regret at having so expressed myself as to appear to depreciate the achievements of the pioneers of the Clarke School, and at having made any claim for my father which he would not have made for himself.

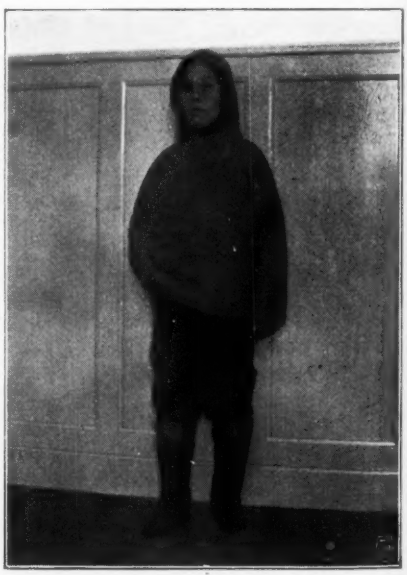
LAURA E. RICHARDS.

Boston, Mass.

An Eskimo Pupil

An Eskimo boy of fourteen years, Ilingauké, has recently been enrolled as a pupil of the institution for the deaf at Copenhagen, where he is to be educated manually. He hails from Angmagssalik, on the east coast of Greenland. Some years ago his parents were converted to Christianity and baptized; but the missionary, who was unable to impart any Christian instruction to the deaf boy, refused to baptize him. When the boy's parents died, however, the missionary saw to it that Ilingauké was sent down to Denmark last autumn to be trained in a school for his kind. Ilingauké is doubly fortunate in that he was born at this period, for before they were Christianized the Greenland Eskimos killed their defective offspring, the deaf included, while the child who survived his parents was formerly thrown into the sea.

When in some five or six years Ilingauké's education has been finished, the learning of a trade included, he will again be sent back to his kinsfolk in Greenland.



ILINGAUKÉ OF ANGMAGSSALIK

HOW TO PRACTISE LIP-READING

Conducted by EDWARD B. NITCHIE, B. A., Principal, The New York School for the Hard-of-Hearing

A MONTHLY DEPARTMENT OF HOME-INSTRUCTION AND OF SUGGESTIONS TO THE TEACHER OF THE ART

XII

FOREWORD.—In my preceding papers I have given a complete description of the various methods by which skill in lip-reading can be acquired. In this paper, and in those to follow, I shall outline and give material for daily work, using the different movements as a foundation.

HOW TO STUDY THE LESSON

Follow this program strictly in the order given. Do only as much in one practise period as you can do thoroughly, going on next time from the point where you left off.

1. Understand the movements that are described.

2. Study the *Movement Words* with the mirror:

a. To see only the new movement, which is indicated by the italic letters.

b. To see in the words each movement that you have previously studied. (Full directions for mirror practise in Chapter VIII, published in THE REVIEW for June, 1911.)

c. To study the words in groups of two or three as indicated to observe the differences between them.

3. Study the *Movement Words* with an assistant, having them read to you in groups of two or three as indicated, while you repeat the words.

4. Study the *Contrast Words,* if any are given:

a. With the mirror, by couplets, to see the differences indicated.

b. With an assistant, the two words of a couplet together, and each couplet several times over, though not always in the same order. Repeat the two words after your assistant in the order given.

5. Study the *Practise Words* with an assistant:

a. Have the words read to you, but do not try to repeat them; simply watch for the special movement indicated by the italic letters.

b. Study each movement. Have a word read to you; when it is understood, have it repeated as many times as there are movements in it. The first time, watch, concentrate on, the first movement, the second time on the second, and so on. Go through the list in this way.

c. Have a word read to you. When it is understood, have your assistant compose and give you a sentence containing the word. Use each of the words in this way. Where homophonous words are given (and such words are indicated by the small number following them, words of the same appearance being followed by the same number) the sentences alone will enable you to tell which is which.

d. Have the words read quickly to you, first in order, then skipping around, while you repeat them. (Full directions for Word Practise will be found in Chapter VI, published in THE REVIEW for May, 1911.)

6. Study the *Sentences* with an assistant:

a. Have the sentence read to you. When it is understood, your assistant should compose for you one or two more sentences associated in thought with the original sentence. Use all the sentences in this way.

b. Have the original sentences read to you rapidly skipping around. You should endeavor to repeat each sentence as quickly as possible.

c. Have each sentence repeated as many times as there are words in it. Do not repeat, but the first time concentrate on the first word, the second time on the second, and so on. Try to see the words as wholes. (Full directions for Sentence Practise will be found in Chapter VII, published in THE REVIEW for May, 1911.)

7. Study the *Practise Words* with the mirror. (See Chapter VIII.)

8. Study the *Sentences* with the mirror. (See Chapter VIII.)

CONSONANTS REVEALED BY LIPS

P, B, M—LIPS-SHUT

For *p,* as in "pie," *b,* as in "by," and *m,* as in "my," the *lips* open from a *shut* position. This *shut* position is the characteristic that reveals these three sounds. It is the same for each in ordinary, rapid speech; the sounds must be told one from the other by the context.

Movement Words

*p*ea—hea*p*
*b*ee—ē*b*
*m*e—dee*m*

Practise Words

*p*ea[1]	***b*it[4]**	*b*ought	hu*m*[8]
*b*ee[1]	*b*un[5]	wee*p*	har*m*
*m*e[1]	mu*d*[5]	he*m*	loo*p*
*p*et[2]	*p*art[6]	ta*p*	*b*ird
me*t*[2]	*b*arn[6]	la*mb*	*p*ee*p*
*b*at[3]	*b*oot[7]	li*p*	*b*oo*m*
*m*at[3]	*m*oon[7]	u*p*[8]	*b*a*b*e
*p*it[4]	*b*ook	hu*b*[8]	*p*i*p*e

Sentences

1. Would you like pea soup for lunch? 2. I never met you before. 3. Did you wipe your shoes on the mat? 4. That will not be a bit of trouble. 5. Did you have a bun for breakfast? 6. That is only a part of the story. 7. The boot is too small for me. 8. Have you read the book? 9. I bought a new hat. 10. Why do you weep? 11. Will you hem the handkerchief for me? 12. I thought I heard a tap at the window. 13. "Mary had a little lamb." 14. I have a cold-sore on my lip. 15. Will you go up stairs for me? 16. That will not do you any harm. 17. Will you loop the loop with me? 18. I saw you peep through the keyhole! 19. The mother held the babe in her arms. 20. The man had a pipe in his mouth.

EXTENDED VOWELS

LONG $\bar{e}$—EXTENDED-NARROW

For the sound of long $\bar{e}$, as in "keen," the lips are slightly drawn back, or *extended*, at the corners, and the opening between the upper and lower lips is *narrow*.

Movement Words

pe*a*—h*ea*p
b*ee*—$\bar{e}\bar{e}$b
m*e*—d*ee*m

Practise Words

b*ee*	theme	*eve*[3]	p*eal*[5]
f*ee*	l*ea*f	h*eave*[3]	m*eal*[5]
w*e*	d*eep*[2]	f*ear**	b*eet*[6]
r*eap*	t*eam*[2]	p*iece*	m*eet*[6]
s*eam*	y*ield*	p*each*[4]	p*eat*[6]
sh*eep*[1]	k*eep*	b*each*[4]	b*eak*[7]
ch*eap*[1]	h*eap*	t*eeth*	m*eek*[7]

Sentences

1. I was stung by a bee or a wasp. 2. What fee does the doctor charge? 3. What shall we do? 4. Whatsoever a man sows, that shall he also reap. 5. Will you sew this seam for me? 6. "Little Bo-Peep lost her sheep." 7. What is the theme of the story? 8. You must turn over a new leaf. 9. The river is very deep. 10. I hope I shall not have to yield. 11. Can you keep a secret? 12. The children are playing in the sand heap. 13. We will hang up our stockings on Christmas Eve. 14. You have nothing to fear. 15. Will you have a piece of pie? 16. I would like some peach pie. 17. The baby has four teeth. 18. Did you hear that peal of thunder? 19. Where shall I meet you? 20. The bird has a very long beak.

SHORT $\breve{e}$—EXTENDED MEDIUM

For the sound of short $\breve{e}$, as in "get," the lips are slightly extended at the corners, and the opening between the lips is neither narrow, nor wide, but is *medium*. The *a*, as in "care," has also this extended-medium movement.

Movement Words

peat, p*e*t—heap, h*e*p
beet, b*e*t—$\bar{e}\bar{e}$b, *e*bb
meet, m*e*t—team, h*e*m

Contrast Words

Contrast the extended-*medium* (short $\breve{e}$) with the extended-*narrow* (long $\bar{e}$); notice that the lips are more open for short $\breve{e}$ than for long $\bar{e}$.

dell—deal	fed—feed
bed—bead	red—reed
said—seed	well—wheel

Practise Words

b*e*ll	th*e*m	*e*bb	sm*e*ll[4]
f*e*ll	l*e*ft	th*e*ft	sp*e*ll[4]
w*e*ll	t*e*ll[2]	th*e*re[3]	w*e*t[5]
r*e*st	d*e*ll[2]	th*e*ir[3]	wh*e*n[5]
s*e*ll[1]	y*e*ll	y*e*s	b*e*g
c*e*ll[1]	k*e*pt	w*e*dge	p*a*re[6]
sh*e*ll	h*e*lp	br*e*ath	b*ea*r[6]

Sentences

1. I rang the door bell twice. 2. I fell down the stairs. 3. Are you feeling well today? 4. I think I shall rest for a while. 5. What will you sell the horse for? 6. I found the shell on the beach. 7. Do you know them very well? 8. I left my umbrella at home. 9. Don't tell anyone. 10. Do you know the college yell? 11. I kept very quiet about it. 12. Let me know if I can help you. 13. When does the tide begin to ebb? 14. I reported the theft to the police. 15. There you are! 16. Did you say yes or no? 17. You will need a wedge to split the tree. 18. I smell the breath of the pine woods. 19. How do you spell your name? 20. The weather has been very wet. 21. I beg your pardon. 22. Will you pare the apple for me?

SHORT $\breve{a}$—EXTENDED-WIDE

For the sound of short $\breve{a}$, as in "cat," the lips are slightly *extended* at the corners, and the opening between the lips is the *widest* of the extended vowels.

Movement Words

peat, pet, p*a*t—heap, h*ĕ*p, h*a*p
beet, bet, b*a*t—$\bar{e}\bar{e}$b, ebb, *a*b
meet, met, m*a*t—team, hem, h*a*m

Contrast Words

Contrast the extended-*wide* (short $\breve{a}$) with the extended-medium (short $\breve{e}$); notice that the lips are open more for short $\breve{a}$ than for short $\breve{e}$.

lad—led	shad—shed
sad—said	tan—ten
bad—bed	fan—fen

* Before *r*, long $\bar{e}$ often has relaxed instead of extended lips, especially if the *r* is strong.

Practise Words

bad[1]	sap	yam	pal
pad[1]	sham[3]	cap[6]	hat[7]
mad[1]	jam[3]	cab[6]	hand[7]
man[1]	that	ham	back[8]
fat[2]	lap[4]	have	bag[8]
fan[2]	lamp[4]	has	bank[8]
whack	tap[5]	hash	map
rap	tab[5]	hath	stamp

Sentences

1. The weather has been very bad. 2. "A man's a man for a' that." 3. "Jack Sprat could eat no fat." 4. The waves struck the boat with a loud whack. 5. Did you rap on the door? 6. The tree is full of sap. 7. Would you like some strawberry jam? 8. That is all right. 9. Will you put the lamp in the window? 10. I heard a tap at the window. 11. I bought the yam at the grocer's. 12. The wind blew my cap overboard. 13. Would you like ham for dinner? 14. Have you ever heard that before? 15. The thief's pal was arrested. 16. Take off your hat and stay a while. 17. A bird in the hand is worth two in the bush. 18. What time will you be back? 19. There is a map of the world hanging on the wall. 20. Put a stamp on your letter.

NEWS AND COMMENT

New Jersey School to Build

An appropriation of $40,000 for a new building is now available, and we hope to break ground at an early date. Unfortunately for us, State Architect Poole, who was to furnish us with plans, has resigned, and this will leave that part of the work to new hands and may cause some delay. By next fall, at latest, we probably shall have our much-needed additional room, and then we shall be able to accommodate all the children applying, something which we have not been able to do for a number of years.—Silent Worker (Trenton, N. J., School for the Deaf).

Arkansas School's Industrial Work Recognized

The printing of the Arkansas State Board of Charities will be done at the Arkansas School for the Deaf, of Little Rock, if negotiations now pending are carried through, as it is expected that they will be. In the publication of the school paper, The Arkansas Optic, Superintendent Isaac B. Gardner has demonstrated the ability of the printer-boys at his institution to do most excellent and tasteful work, their handling of types being very effective, while the printed sheet itself is never marred by type-blurring or offset.

Doing the lower thing when the higher thing is possible constitutes one of the greatest tragedies of human life.—O. S. Marden.

SUGGESTIONS TO TEACHERS

Try This

Some day when you have exhausted your supply of supplementary work in arithmetic, tell the class that each one may prepare five problems and that the best ones will be given to the class to solve. Require each pupil to solve his own problems before class time. During class, just for sake of the pleaure it will give the child, let several dictate one of their problems to others in the class. Those not used during class may be kept by the teacher for future use. Some good ones are sure to be among them.—American Journal of Education.

How the Teacher Should Lead

In the school-room, imitation and emulation play absolutely vital parts. Every teacher knows the advantage of having certain things performed by whole bands of children at a time. The teacher who meets with most success is the teacher whose own ways are the most imitable. A teacher should never try to make the pupils do a thing which she cannot do herself. "Come and let me show you how" is an incomparably better stimulus than "Go and do it as the book directs." Children admire a teacher who has skill. What he does seems easy and they wish to emulate it. It is useless for a dull and devitalized teacher to exhort her pupils to wake up and take an interest. She must first take one herself; then her example is effective as no exhortation can possibly be.—William James.

Headline Stories

When that class in English composition runs short of material in the way of subjects to write about, you may introduce a pleasant variety by assigning a number of headlines from newspapers. Let each pupil select a headline and write a story to fit.

A headline when well matched with the story to which it belongs is a good illustration of *multum in parvo;* a tragedy or a comedy may be expressed in a headline; it expresses more by inference and suggestion than by the words employed. Here are a few examples:

The Old Rifle Had a Load in It.
Crossed the Pasture Wearing a Red Hat.
Usually Smoked Sixty Per Day.
He Could Not Swim.
Struck the Church Spire.
Ladder Old and Worm Eaten.
He Rocked the Boat.
Head Lights Were Not Burning.
Angry Father Overtook Them.
It Was the Savings of a Lifetime.
A Deadlock.
A Live Wire.
Found After Forty Years.

—American Journal of Education.

THE DEAF CHILD'S HOME TRAINING

Conducted by MRS. J. SCOTT ANDERSON, Swarthmore Home for Deaf Children

A DEPARTMENT TO AID THE MOTHER IN THE REARING OF HER DEAF CHILD—INQUIRIES WILL BE ANSWERED BY THE EDITOR

Daily Program, Concluded—Language and Reading[1]

The following is a good beginner's list of words to be taught:

a cat	a boy	a sheep	a doll	a bead	a basket
a baby	a fish	a lamb	a rat	a mat	a pudding
a dog	a woman	a hen	a top	a slat	a chestnut
a cow	a girl	a peanut	a needle	a thimble	a flower
a cake	a book	a horse	a spoon	a block	a thumb
a wagon	a coat	a shoe	an arm	an eye	a pig
a ball	a fork	a cap	a hat	a tree	a pin
a chair	a bed	a table	water	meat	milk

Be careful always to use "a" when it should be used (as *"a boat,"* not *"boat;"* *"a telephone,"* not *"telephone"*) and to omit it when it should be omitted (as *"bread,"* not *"a bread;"* *"water,"* not *"a water;"* *"sugar,"* not *"a sugar."*

In lip-reading, teach the child to give you any of these things when you ask for them.

No other work can so well prevent the little man from falling into the habit of accepting things without caring to learn their names, a tendency which all deaf children have.

So far we have included only one class of words—nouns. As will be seen by the close observer, the work has been reversed and there has been variety. First, the child's attention has been called to an object, then he has been given the word for it. Later the operation was reversed, the card bearing the name being given first and the child finding the object, and there have been given several ways of doing the same thing, so that the work has not been monotonous.

This work may, however, be elaborated with good results, as follows: Show a picture of a girl running to the child and place on the kindergarten table in front of him. Write on a cardboard slip *"A girl is running,"* being sure to begin with a capital and end with a period. With kindergarten scissors clip the slip into two pieces, reading, respectively, *"A girl"* and *"is running,"* and put the two slips upon the picture so as to form the complete sentence. Call the child's attention to the fact that the girl is really doing something. Remove slips and give to the child, who will replace them. Of course, you clap your hands. Next teach *"A girl is sitting,"* but do not write *"A girl"* again—simply *"is sitting."* Remove the picture of the girl running and substitute one of a girl sitting. Remove the slip *"is running"* and put the slip *"is sitting"* in its place. Call the child's attention to the new slip and picture. Remove the whole sentence; hand the slip to the child and allow him to replace it. Then reverse all slips and pictures. Let the child select a picture and the corresponding slips. He will soon be able to distinguish between the written forms of the two verbs when seen on a slip.

Next allow some member of the family whose name the child knows in written form to sit down in the school-room and have the lad compose the sentence "—— *is sitting,"* using the slips you have made, of course. After a few days' drill lay on the table a picture of a boy running, having first made a number of slips bearing words already familiar to the child, as *"A boy, "A cat," "A dog," "A man," "A woman."* Allow him to try, alone, to form the sentence *"A man is running."* Prepare various pictures illustrating these sentences and let the child construct these sentences from slips you have made. Sometimes show him the sentence, requiring him to secure the proper picture. Do not watch him all the time, but leave the table, or even the room, so as to enable him to work by him-

[1] Preceding divisions of this daily program have been treated in THE VOLTA REVIEW, November, 1910—November, 1911.

self. As he grows older you will appreciate anything which makes him self-active.

Add the names of things, of members of the family, of friends, and of acts, as many as you can without crowding his mind, always keeping up the interest by new combinations, but never wearying the child, who is sure to appreciate his ability to form these sentences.

Keep the slips in a box with a pasteboard partition, all those bearing names of things or people (nouns) in one partition, and those bearing the names of acts (verbs) in the other. Thus you are teaching language and the constituent parts of the sentence, subject and predicate.

Always, after a sentence has been successfully put together, allow the child to replace each card in its proper division. As a pastime empty the contents of the box on the table, letting the little boy put the cards away again just as they should go, picking them up just as they happen to come.

Reading, "the Understanding of Written Expressions"

I have called the above work language, but of course it is also reading. Still the aim has been methodical teaching of language. We now are able, for a change, to take up a similar kind of work which has for its end the understanding of written expressions, particularly such as require action on the part of the child who, when he has reached his fifth or sixth year, is ready to "absorb" the meaning of written words and sentences. On the blackboard write *"Run,"* remembering to begin with a capital and end with a period. Then tell the child to run, and show him that when you write the word on the blackboard he is to perform the same act. Repeat the operation until he thoroughly understands.

Next take a longer sentence, so that the two may not look alike, such as *"Get your hat,"* and teach the meaning as before. Mix the two, first writing one and then the other. If these are remembered, on the following day add another to the list. Keep on with the commands, even to writing, *"Put your cap in the closet," "Put away your ball," "Give your pencil to Anna," "Get a drink,"* etc., being careful to avoid foolish sentences, sentences without meaning, given only to teach form. There are so many little things that can be taught which the child ought to know that you must avoid teaching the useless things. A note-book carried in the pocket will be found a great help, as little commands may be written down as the necessity for their use occurs during the day, and these may be used for lip-reading as well as reading.

The suggestions contained in the preceding pages may all be easily followed at home, as they involve only the simplest elements of education, but are at the same time most important, for they develop attention, observation, imitation, the sense of sight, and the sense of touch, upon which depend the child's future ability to become a good pupil.

Repeat the child's success to the family, so that he may learn to delight in the mere doing of things. Always go from what he knows to what you would teach him—from the old to the new—with many repetitions of the former in new form.

Be delighted with small results, and remember that there can be no failure, no matter how small the results may appear. Anything learned is progress. Make the work with him alive with your own personality and he will be a comfort to you.

Then his character will be something you have consciously helped to form, by untiring and thoughtful energy, during a period of life when the education of the deaf child is usually completely neglected—from the age of three to six years.

"Home Training of the Young Deaf Child" was originally written and delivered in French at the Third International Congress on Home Education, held in Brussels, August 21-26, 1910. In the present form, however, parts of the text are somewhat elaborated and altered in the hope that the whole may be found an acceptable addition to the literature of the pedagogy of the deaf, and that not only mothers, but young teachers will gain therefrom some insight into the instruction which should be given in play to the very little deaf child.

(The end)

THE INDUSTRIAL DEPARTMENT

Conducted by WARREN ROBINSON, M. A., School for the Deaf, Delavan, Wis.
Chairman Industrial Section of the Convention of American Instructors of the Deaf

THE ECONOMIC EFFICIENCY OF THE DEAF—SUGGESTIONS TO INDUSTRIAL TEACHERS, STORIES OF SUCCESS, AND HINTS ON HOW TO SUCCEED

A LIBRARY ON AGRICULTURE

It may be questioned if any university in the country occupies a higher place in practical work, particularly along agricultural lines, than the University of Wisconsin. And in our search for a model agricultural library we naturally looked to that institution, or rather that department of it known as the College of Agriculture, which conducts an agricultural experiment station. That college library contains about 11,000 volumes and 8,000 pamphlets. Below is given a sort of representative list, which will furnish readers with some idea of what an agricultural library should be or embrace:

Bailey: Principles of Agriculture.
Burkett, Stevens, and Hill: Agriculture for Beginners.
Davis: Rural School Agriculture.
Duggar: Agriculture for Southern Schools.
Goff and Mayne: First Principles of Agriculture.
Hatch and Haselwood: Elementary Agriculture.
King: The Soil.
Vivian: First Principles of Soil Fertility.
Roberts: Fertility of the Land.
Storer: Agriculture in Some of Its Relations with Chemistry, 3 vols.
Warrington: Chemistry of the Farm.
Aikman: Manures and Manuring.
Voorhees: Fertilizers.
Snyder: Soils and Fertilizers.
King: Irrigation and Drainage.
Hunt: Cereals in America.
Woll: A Book on Silage.
Spillman: Farm Grasses of the United States.
Shaw: Soiling Crops and the Silo.
Coburn: Alfalfa.
Myrick: Book of Corn.
Frazer: The Potato.
Bailey: Principles of Fruit-growing.
Bailey: Pruning Book.
Card: Bush Fruits.
Bailey: Principles of Vegetable Gardening.
Green: Vegetable Gardening.
Taft: Greenhouse Construction.
Taft: Greenhouse Management.
Bailey: Plant Breeding.
Maynard: Landscape Gardening.
Lodeman: Spraying of Plants.
Sanderson: Insects Injurious to Staple Crops.
Smith: Economic Entomology.
Comstock: How to Keep Bees.
Plumb: Types and Breeds of Farm Animals.
Davenport: Principles of Breeding.
Shaw: Animal Breeding.
Roberts: The Horse.
Coburn: Swine in America.
Henry: Feeds and Feeding.
Jordan: Feeding of Animals.
Shaw: Feeding of Farm Animals.
Mayo: Diseases of Animals.
Wing: Milk and Its Products.
Farrington and Woll: Testing Milk and Its Products.
Gurler: The Farm Dairy.
Jensen: Essentials of Milk Hygiene.
Watson: Farm Poultry.
Salmon: Diseases of Poultry.
Card: Farm Management.
Roberts: Farmer's Business Handbook.
Roberts: The Farmstead.
King: The Physics of Agriculture.
King: Ventilation.
Davidson & Chase: Farm Machinery and Farm Motors.
Lipman: Bacteria in Relation to Country Life.
Terry: Our Farming.
Woll: Handbook for Farmers and Dairymen.
Hunt: How to Choose a Farm.
Bailey: Cyclopedia of American Agriculture, 4 vols.
Bailey: Cyclopedia of American Horticulture, 4 vols.

Government Publications

Year Book of the U. S. Department of Agriculture.
Farmers' Bulletins.

Classification of Miscellaneous Books

RE—Agriculture in general (biography, history, encyclopedias).
REN—Agricultural education.
RF-RK—Sciences (meteorology, physics, chemistry, industrial chemistry).
RL—Foods.
RM-RN—Soils, drainage, fertilizers.
RO—Biology, microscopy, botany (including farm crops).
RP—Horticulture, floriculture.
RQ—Forestry.
RR—Bacteriology.

RS—Veterinary science.
RT—Animal husbandry (horses, cattle, sheep, poultry, swine, insects).
RV—Pedigree books.
RW—Dairy farming, butter and cheese making.
RX—Agricultural engineering.

LITTLE STORIES OF SUCCESS

William Hurst is a prosperous farmer near Emporia, Kansas.

Bernard Williams, of Madisonville, Ky., is a tobacco raiser and breeder of fine Plymouth Rocks.

John Adleman is so successful at farming in Illinois that he can afford to buy a $5,000 automobile.

F. E. and H. E. Ellis are located on ranches near Los Angeles and are doing well. Both hail from Kansas.

William Van Lewis, a graduate of the Mt. Airy School, has a position in a watch factory at his home in Springfield, Ill.

Frank Phillips, a former pupil of the Minnesota School, is the owner at Bird Island of forty acres of land, which he is working to advantage.

Ike Runyan, for a while a student at the Kansas School, is now foreman of the Marion (Kas.) Record, the paper owned by ex-Governor Hotch.

A gold medal has been presented to Miss M. E. Grow, of Pittsburg, by the Oliver Typewriter Company for faithful services to the company for the last five years.

Harvey Wells, a former pupil at the Minnesota School, now employed by the Minneapolis Tent and Awning Company, is being entrusted with the responsible job of putting up awnings in a number of southern Minnesota towns.

George A. Levan, of Philadelphia, an oral graduate, recently gave most convincing proof of his ingenuity and skill as a carpenter by presenting to All Souls' Church, Philadelphia, two sizes of step-ladders, a reading-desk, and an alms-receptacle.

Foreign Schools at the Delavan Industrial Exhibit

The Winnipeg (Canada) School had made an attractive mahogany case with swinging frames, on which were displayed photographs of the school, samples of engraving, printing, etc., and blanks used in conducting "The Bank of Silence," to teach business and thrift to the deaf pupils.

The Naples School, in Italy, sent a calendar, which set forth the object of the institution, asked contributions, and told of the trades taught, which were surprisingly numerous.

The Palamcottah School (India) had models of a cent used in that country, one of the means by which water is drawn from wells, a good-sized mat, a few other unique articles, and a sample or two of sewing. Superintendent Clarke declared that part of this exhibit represented some of the finest handwork he had ever seen. The cart was practically broken all up in transmission, for the whole exhibit had been poorly packed.

ACKNOWLEDGMENTS

Acknowledgment is made of the receipt of the following publications, which have been placed in the files of the Volta Bureau:

From Dr. A. L. E. Crouter and Mr. E. S. Thompson, a bound copy of volume 25 of The Mt. Airy World.

From Miss Mary S. Garrett, "Address Made at the Annual Meeting of the New Jersey Congress of Mothers, Held at Plainfield, N. J., November 11, 1911, by Mary S. Garrett."

From His Majesty's Stationery Office, "The Seventy-seventh Report of the Commissioners of National Education in Ireland."

From the executive heads of the various institutions, reports of the following schools: South Dakota; Nyborg, Denmark; Copenhagen, Denmark; Reykjavik, Iceland; Genoa, Italy; Döbling, Vienna, Austria; Sumner, New Zealand.

Change of Superintendents at Idaho School

Mr. Paul Martin has resigned as superintendent of the Idaho School for the Deaf and the Blind, in order to take up architecture. He is succeeded by Mr. W. E. Taylor.

Mr. J. H. Johnson Receives Degree of LL. D.

The degree of LL. D. has been conferred on Mr. J. H. Johnson, superintendent of the Alabama School for the Deaf, by his alma mater, the Alabama State University.

New Life Member

The Association has been honored by the entrance into life membership of Mr. Hugh L. Cooper, of Keokuk, Iowa.

THE UNIVERSAL ALPHABETICS

Conducted by M. GARDINER

MONTHLY LESSONS IN MELVILLE BELL SPEECH SYMBOLS, THE MASTERY OF WHICH ENABLES THE STUDENT CORRECTLY TO PRONOUNCE ANY SOUND IN HUMAN SPEECH

mufnjmmfqcfqlbcdmdm mdjqcnpbzjm mlcdmdjoAimclEAilm

-Ailocl ifn Ailmmdjo dmifbbEfofqcljedncfeAilmcofmzjm

Ailmmdjomjofqc dmdlEcmjeqiw dAiwdjEjmqcfbjdmjeqiw

-ejocfe jlqbocfeiejul mmcnjle dlndmdl ejoqo

-eljmdmofbjofqfn eAcljmEfmilbjmzjme mfifbqio mmcn

-mjocbujedmdl eljmzjofEdmdljmqjoebcbdjo Aiecfcl

mmcnmjodmdl Aiecfcljm

---

ifo cozm

<oj oj ejqjqp jfe Ainmdl mmnmjfe jmfubm mje jdlm je

<olm je jo jl ej ifo Af njm jo Ail jl mju ifo mEmln

-Aiw ejpcpl mdl bncdlo mifcnqiw mdl dqie jml efnc ejp

-ejncu cmlcnAiw mmdlE iw mlc mdl <mmdlfe mj njm Aifa

<ocnlm ol <ojlm oif ej jo Aiuu je mju je <ojlo dqifmje

-bncfe ol qjp mf je ej olc jfe Aif mj jlm mje nocjma

-ifmn jmle ejlm ipnm ifo je ml Ailmcml Af dmcjlb mlc

-ef <ejocqmmcq elo mf mju je mmcfbmmdl mjfe ifm

Ailojejm

-fmf ocnjcj mjfe ejo jo ej ejb ju ml Ailmcmdmlmp

-mmcjb mjo efnc njpl mdl nifojm jomj jo mdmjcmlc

jo olo q bfcq dqifmje jo bejm jf mlq dqpl ejo ocnjcj

-mjomcl jmejmcmlo mmifb ml ocjb jo ocjb <dmifb Ailc mmdlo

-mjo mdl <dAjlo jmlc mfe jo <bAfe dAifo mfe ol

mlpl <bAfe

-mjo jo ojnocn dmdAfo jo mdAfe mj ejlo Aifg jml ejbocnjmje mdm

-ofcmje mdm mcun mojm mjo ef ofc ifmnjm ocnfo

-jo ml jmfud mdAinml ifo njolm -oj ol ejpjqp jo lo

-ejf olpjqp jo lo- wjolm oif

-imaiuamic ajuiofoym ouoiojmonAildnaioiuoie

noiqnAjmie aAiojmEjmojmBmfe oiDym

-am uoyuAjmBjoAeiojmxfc aAiexfEouoymiu

noiqnAjuoBjoAeiojmxfc aAiexfEouoymiu

-am uoyuAjmBjoAeiojmxfc aAiexfEouoymiu

aiajmEjme DxTeaxiouieaoie
Bjujeuieaofa aeip nInDinoim
aieymEi iwmiomie
jDimmmfDamxTeym aieym

DxTuaaAi ujeio oaioafDmio
ojmaaAiEnieiaieifmaaAi
DxTemjeaeiDuujcoimmj
ajejmjeuioim DimjM

amifB

-efofoymmBjme DxTeaxioaim ajuujo meiEnjm

xifEieAnEimim

noujmBnxifeaxiEojoim xiEifBiDmieifnmfe BxiwmjEjm

-oie aaiEofmaiaiajm xiujeifo amifBEfofoim

Basis of the Symbols

BASIS FOR CONSONANT SYMBOLS

BASIS FOR VOWEL SYMBOLS

N. B.—Those who desire to go more deeply into the subject of the Melville Bell Symbols are recommended to consult Dr. Alexander Graham Bell's lectures upon "The Mechanism of Speech," delivered before the American Association to Promote the Teaching of Speech to the Deaf. Published by Funk & Wagnalls Company, New York and London: Second edition, 1907. The Scientific use of the Symbols is explained in the chapter on "Methods of Studying the Mechanism of Speech," pp. 34-50. For "Method of Teaching the Symbols to the Deaf," see pp. 51-76. For a quick introduction to the system, see "English Visible Speech in Twelve Lessons" (Volta Bureau: 50 cents to members, 60 cents to others).

Special shuttles, containing nearly every Speech Symbol yet devised, have been cut for use on the Hammond typewriter. The Universal Alphabetics keyboard can be used interchangeably with the regular English characters on this machine. The price of this special shuttle of Universal Alphabetics, if bought directly from the Volta Bureau, is $2.50 each. Address the Superintendent.